4D-A206 392

#### **BIENNIAL BUDGET ESTIMATES DEPARTMENT OF THE NAVY FOR FY 1990 AND FY 1991 SUPPORTING DATA**



SUBMITTED TO CONGRESS JANUARY 1989



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ASSET CAPITALIZATION PROGRAM **DEPARTMENT OF THE NAVY** INDUSTRIAL FUNDS

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DEPARTMENT OF THE MANY
MANY INDUSTRIAL FUND
INDUSTRIAL FUND ASSET CAPITALIZATION PROGRAM
FY 1990/1991 PRESIDENT'S BIENSTAL BUDGET
(Dollars in Millions)

Line	i Item	E .	FY 1988	2	FY 1989	L.	FY 1990	1	FY 1991
Number	Description	Quantity   	Total cost	Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
-	   Equipment costing			 			 		
	\$1 million and more		40.0		43.1		71.1		44.1
~	Modernization		16.9	 	10.7		30.5		17.3
m	New Techniques	- <del>-</del> -	50.5		14.6		24.9		22.6
*	CAD/CAM	 	3.8		1	- <del>-</del> -	5.9		6.9
w	Major ADP Equipment		50.8		48.9		42.9		48.6
v	Equipment costing   under \$1 million		293.0		182.9		112.5		164.5
٢	Minor Construction		43.6		46.5		49.8		51.0
<b>6</b> 0	Management Information   Systems costing over   \$1 million		26.2		4.01		7.6		4.6
σ	Management Information   Systems costing under   \$1 million		14.3		7.7		æ. vo		4.
	GRAND TOTAL		544.4		364.8		352.0		365.0
						_ ]		 - 	

AEROGAUTICAL ENGINEERING CEPTERS
DEPARTMENT OF THE BAY

MANY INDUSTRIAL FUND
ASSET CAPITALIMATION PROGRAM
FT 1990/FT 1991 PRESIDENT'S BIMMETAL BUDGET
(Dollars in Millions)

		FY	FY 1988	FY	1989	FY	FY 1990	FY	FY 1991
euil	l Item	_	Total	_	Total	_	Total		Total
Number	Description	Quant	Cost	Quant	Cost	Quant	Cost	Quant	Cost
A001	Daisy Engineering Workstation								1.0
	Total ACP Equipment Costing								
	\$1M or More	- <del>-</del>	- <b>-</b>		_				1:0
A002	Local Area Network		6.		?		·		 
	Total Modernization		<b>6</b> .		?				- <del>-</del> -
A003	RAMP						8.9		2.1
	Total New and Expanded Capability						8.9		2.1
A004	CCF Satellite Minicomputers			m 	1.5			m 	1.4
<b>A</b> 005	NAC Central Computer Facility		- e.s						
	Total Major ADP Equipment System		8.9		1.5		:		
<b>900</b> €	CAD/CAM/CAE System						• •		<b>*</b>
	Total CAD/CAM/CAE System						•. •.		<b>*</b>
A007	Equipment Under \$1M		1 10.7		5.1		3.7		 8:
A008	Minor Construction		1.4		2.0		1.5		2.3
									<b>-</b>
								IF EXHIBIT ACP-1	IT ACP-
				ı				Page 1 of	of 2

ARDOMANTICAL ENGINEERING CENTERS
DEPARTMENT OF THE HAVY
HAVY INDUSTRIAL FUND
ASSET CAPITALISATION PROGRAM
FT 1990/FT 1991 FRESIDENT'S BIENNIAL EUDGET
(Dollers in Millions)

		FY 1988	988	FY	FY 1989	FY	FY 1990	FY	FY 1991
Line	- Item	_	Total		Total	-	Total		Total
Number	Description	Quant   Cost	Cost	Quant   Cost	Cost	Quent	Quant   Cost	Quant   Cost	Cost
600 <b>V</b>	RAMP MIS						1:0		1.6
	Total MIS Costing Over \$1M or More						0.1		1.6
1 A010	Management Info System Under \$1M		6.3		<b>*</b> .		9.		· · · · ·
	Total Program Aeronautical		_						
_	Engineering Centers		26.3		9.5		14.7		1.51
					-				
_		_	_			_	_		_
_		_	_	_		_	_		_
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_		_	_	_		_	_		_
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						_			_

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ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	TION PRO	BLAM JUS	TIFICAT	TARE NO.				A. BU	BUDGET SUBMISSION	MISSION			1-
(Doll.	(Dollars in Thousands)	nousands	~					T.	FY 1990/1991 PRESIDENT'S	91 PRES	(DENT'S		_
									BICHMIAL				٦,
B. Industrial Fund/Activity Group/Activity	/Activity	_			<u>ပ</u> —	C. ACP-1 Line No. & Item Description	ne No.	E Item D	escripti	uo			_
					_								_
MIF/Aeronautical Engineering Centers/MAC	enters/M	Ų				A001 - [	aisy En	yinee rin	A001 - Daisy Engineering Workstation Enhancements	ation E	hancem	ints	
		FY 1988			FY 1989			FY 1990			FY 1991		· - ·
		Unit	Unit   Total		Unit	Unit   Total		Unit   Total	Total		Unit	Unit   Total	- <sub>1</sub>
ELEMENTS OF COST	Quent	Cost	Cost	Quant   Cost   Quant   Cost   Cost	Cost		Quant	Cost	Quant   Cost   Total   Quant   Cost   Cost	Quant	Cost	Cost	
	_	_		_		_		_	_		_		_
End Item	_	_		_		_		_	_		_	1,000	_
	_	_		_		_		_	_		_	_	_
	_	_				_		_	_		_	_	_
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	_	_				_		_			_	_	_
	_	_		_		_		_	_		_	_	_
		_											_
													1

Currently, circuit design is accomplished either manually or on an existing Daisy Personal Logician workstation. In the manual design method is the electrical engineering workstation, and MAC has many Daisy Personal Logician 286 models in use, phase to the full-scale development phase. The Daisy Personal Logician 386 is a new model which, utilizing new technology, but unfortunately there are not enough to keep up with the demand for workstation time. For the designs which are entered entered on the Daisy Personal Logician 286, functional simulation is performed with accurate component models to allow for modifications often occur as a circuit matures from the breadboard phase to the production model. An improvement over the accomplished during the design phase, eliminating the need for costly reworks as the design progresses from the conceptual circuit optimization without the need for numerous breadboard models. Testability analyses and fault simulation are also manual design case, circuit performance is verified through the fabrication of a breadboard model. Extensive circuit can perform circuit design three times as fast as the Personal Logician 286. This request will upgrade the existing 286 based units to 386 units.

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	ALIZATION PROGRAM JUST (Dollars in Thousands)	SRAM JUS	TIFICAT	ION SHEE	E4			A. BU	BUDGET SUBMISSION FY 1990/1991 PRESIDENT'S	MISSION 91 PRES	EDENT'S	
									BIENNIAL			
B. Industrial Fund/Activity Group/Activity	/Activity	_			-	C. ACP-1 Line No. & Item Description	ne No.	r Item D	escripti	E O		_
MIF/Aeronautical Engineering Centers/WAEC	enters/R	Ų.				A002 - I	Cocal Ar	Matwo	A002 - Local Area Network (LAN)			
	_	FY 1988		_	FY 1989			FY 1990			FY 1991	
	_	Unit	Unit   Total	_	Unit	Unit   Total		Unit   Total	Total		Unit	Unit   Total
ELEMENTS OF COST	Quent	Cost	Cost	Quant   Cost   Cost   Quant   Cost   Cost	Cost	Cost	Quant	Cost	Quant   Cost   Total   Quant   Cost   Cost	Quant	Cost	Cost
í •	_	_	;			-		_				
Mnd Items		<del>-</del> -	940			500			264			006
	_	_		_	_	_		_	_		_	_
	_	_		_	_	_		_	_		_	_
											_	_

It is also designed to be flexible enough to satisfy the worst case demand and provide an enduring base to incorporate future of various departmental LAMs to provide connectivity to fiber optic backbone is the central theme of the NAEC LAN. All plans are being executed with that understanding. Total Center communication requirements will be satisfied by the NAEC LAN. This efficient transfer of information. This allows every user device on the network to communicate with every other user device. providing Center users with capabilities as they become available. The cost and strategies of decentralized implementation technology (industry standards). The impact to the Center of not obtaining sufficient funding allocations will add to the various data bases such as UDAPS; BEST; EDMICS; CAFED; SPAR, etc., as they become operational for activity use, drives the Supports a state-of-the art LAM with a technology that provides a broad bank backbone cabling architecture with system growth capabilities for RAEC. The backbone is tapped into appropriate buildings and areas within the buildings to support MAEC data, voice video, physical security, and graphics requirements. This allows NAEC to tie together current and furure initial baseline cost due to the inefficient non-utilization of peripherals and data. The center's phased approach to the information systems in a cost-effective environment. A LAN is supportive of full connectivity in both communications and installation of the LAN topology was predicated on efficient business practices. The systematic planned availability of NAEC phased installation plan. This approach allows NAEC to optimize the allocated funding for each given year, thus network also allows for communication throughout CONUS and the Fleet.

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ASSET CALITAL	ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	RAM JU	STIFICAT	ION SHEET				- A. B	A. BUDGET SUBMISSION	BMISSION		
g)	(Dollars in Thousands)	rousend	<u> </u>					<b>.</b>	Y 1990/199 BIENNIAL	FY 1990/1991 PRESIDENT'S BIENNIAL	EDENT'S	
B. Industrial Fund/Activity Group/Activity	rou <b>p/A</b> ctivity	<b>.</b> .			<u>.</u>	C. ACP-1 Line No. & Item Description	ine No.	£ Item	Descript	ion		
MIF/Aeronautical Engineering Centers/WAEC	ng Centers/NJ	S S				A003 - RAMP	RAMP					
	 	FY 1988	80		FY 1989			FY 1990			FY 1991	
	-	Unit	Unit   Total		Unit	Unit   Total	_	Unit	Unit   Total		Unit   Total	Tota
ELEMENTS OF COST	Quant	Cost	Cost	Cost   Cost   Quant   Cost   Cost	Cost	Cost	Quant	Cost	Total	Cost   Total   Quant   Cost   Cost	Cost	Cost
	_		_	_		_	_	_	_			
End Items	_		_	_	•	_	_	_	008'9	_	_	2,100
	_		_	_		_	_	_	_	_	_	
	_		_	_		_	_	_	_	_	_	
	_		_		_	_	_	_	_	_	_	
	_		_	_	_	_	_	_	_	_	_	
	_		_	_	_	_	_	_	_	_	_	
	_	•	_	_		_	_	_	_	_	_	

the Avionics Center will be configured to manufacture Printed Wiring Assemblies (PWA). Funds requested will provide for the RAMP (Rapid Acquisition of Manufactured Equipment) is a self-contained and fully automated shop which can produce parts Shipyard. The cells at the NADEP and Shipyard will be configured to produce Small Mechanical Parts (SMP) while the cell at digital drawings and specifications, Computer Aided Process Planning, Group Technology schemas and telecommunications, RAMP readiness through increased availability of spare parts. Spare part inventory levels and carrying costs are also expected on demand from prepositioned raw materials and digital parts data. Through FY 1991, the Navy plans to procure a total of administrative leadtimes (up to 90%), establish sources for hard to obtain spare parts at reduced unit costs, and improve three RAMP cells which will be installed at MADEP Cherry Point, Naval Avionics Center, Indianapolis and Charleston Naval establishment of one PWA cell and associated software. The RAMP cell at NAC will be fully operational in FY 1991. RAMP technology provides the flexibility to efficiently produce small Lot sizes (as small as one) over a wide range of parts will provide improved quality and repeatability. In addition, it is expected that RAMP will decrease procurement and (initially up to 3,000 per work cell). Through the use of Computer Integrated Manufacturing concepts, standardized to be significantly reduced through use of Just-In-Time philosophy for Customer ordering of RAMP produced parts.

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	ALIZATION PROGRAM JUST (Dollars in Thousands)	GRAM JU	STIFICAT 6)	TON SHEE	F			- A. B.	A. BUDGET SUBMISSION FY 1990/1991 PRESIDENT'S	MISSION 191 PRES	TDENT'S	
									BIENNIAL			
B. Industrial Fund/Activity Group/Activity	oup/Activit	λ			<del>-</del> -	C. ACP-1 Line No. & Item Description	ne No.	f Item I	)escript:	uoı		
WIF/Aeronautical Engineering Centers/WAC	g Centers/N	) <b>Y</b> C				A004 - (	CF Sate	llite Mi	A004 ~ CCF Satellite Minicomputers	85 14		
		FY 1988	<b>.</b>		FY 1989	6		FY 1990			FY 1991	
ELEMENTS OF COST	   Quant	Unit   Cost	Unit   Total	Quant	Unit	Unit   Total   Unit   Total   Unit   Total   Unit   Total   Unit   Total   Quant   Cost   C	Quant	Unit   Total	Total	Quant	Unit	Unit   Total
End Items	<b>-</b> -			e -		1 1,500		~ -		_		1 1 400
				. <b>_</b>		-		_				- –
				_ <b>-</b>								
		_	_	_	_	_		_			_	_
		_		_	_	_		_			_	

need for computing resources intensifies. It is estimated that any further loss of productivity due to the lack of resources These computers will be required to provide enhanced computing capability for various programs and corporate performance computing resources. This lost productivity will continue to be a serious problem as avionic systems become complex and the objectives. Some programs are experiencing productivity losses equivalent to one man-year as personnel wait for access to could seriously affect NAC's ability to support several important programs.

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	ZATION PRO	GRAM JUS	TIFICAL	TON SHEET				A. BU	BUDGET SUBMISSION	MISSIM		
<b>Q</b> )	(Dollars in Thousands)	housand	2					-	1990/15	FY 1990/1991 PRESIDENT'S	(DENT'S	
									BIENNIAL			
B. Industrial Fund/Activity Group/Activity	up/Activit	<b>≱</b> •			ن 	C. ACP-1 Line No. & Item Description	ine No.	f Item [	<b>e</b> scripti	uoı		
MIF/Aeronautical Engineering Centers/WAEC	Centers/N	I <b>NE</b> C				) - 900¥	A006 - CAD/CAM/CAE System	CAE Syst	•			
		FY 1988			FY 1989			FY 1990			FY 1991	
	  -	Unit	Unit   Total		Unit	Unit   Total		Unit	Unit   Total		Unit   Total	Total
ELEMENTS OF COST	Quant	Quant   Cost   Cost	- 1	Quant   Cost   Quant   Cost   Total   Quant   Cost   Cost	Cost	Cost	Quant	Cost	Total	Quant	Cost	Cost
End Items		 	200					 	009			400
		- <b>-</b>		_								
	_	_	_			_		_		_	_	
	}											

identification and visualization of the final product. Multiple tasking operating system allows concurrent operations of the with the necessary hardware/software elements to perform their unique engineering disciplines. It provides immediate access and retrieval of filed engineering drawings and other data. Electronic distribution of information between user/offices and The Computer-Aided Design/Computer-Aided Manufacturing/Computer-Aided Engineering System provides engineering personnel catapult and arresting gear systems and integrate engineering design with numerical control manufacturing equipment. Also, The system will benefit the design of visual landing aid and catapult/arresting up-to-date computer data base technology to maintain configuration control of the system reduces time spent in maintaining gear control systems, investigation of mechanical/electrical/hydraulic system dynamic model simulation, reduce weight of micro-computer, graphics monitors, pen/electrostatic, monochrome/color plotters, mechanical design software, networking, accurate data required for this function. The CAD/CAM/CAE system will provide reduced errors, improved design quality, other Naval activities reduces transfer time. Ability to model and simulate hardware/software design allows for early the system will enhance NAEC's ability to provide expert engineering support. Types of equipment required are 32 bit Central Processing Unit for maximum throughput, while increasing the amount of work for a given time period. Use of reduced cost, and increased productivity. interfaces, cabling and software.

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	ATION PRO	GRAM JU	STIFICAL	ION SHEE	H			A. B.	JDGET SU	A. BUDGET SUBMISSION		
( <b>Do1</b> )	(Dollars in Thousands)	housand	î					_ E	1/0661	FY 1990/1991 PRESIDENT'S	DENT'S	
									BIENNIAL	٠		
<ol> <li>Industrial Fund/Activity Group/Activity</li> </ol>	p/Activit	۶.			ن -	C. ACP-1 Line No. & Item Description	ine No.	I Item	Descript	ion		
NIF/Aeronautimal Engineering Centers/NAC/NAEC	Centers/N	AC/NAEC				A007 - 1	A007 - Equipment Under \$1M	. Under	\$1M			
		F7 1988	E0		FY 1989	6		FY 1990			FY 1991	
	_	Unit	Unit   Total	_	Unit   Total	Total		Unit	Unit   Total		Unit   Total	Total
ELEMENTS OF COST	Quant	Cost	Cost	Quant	Cost	Cost   Cost   Quant   Cost   Quant   Cost   Total   Quant   Cost   Cost	Quant	Cost	Total	Quant	Cost	Cost
End Items			1 110.643			5.057			3.751			4.824
	- –						_					
	_			_	_	_	_	_		_	_	
							    -					

design, development, and manufacturing of high quality, state-of-the-art avionics, catapult and arresting gears for the Navy. This equipment also supports base operations and many administrative functions including financial control, material control, technological capability of the equipment base. It will support and insure accomplishment of the missions of research, test, equipment that support the mission. Items include the following: 2 Lectriever filing systems, 1 telephone switching unit, I computer controlled wire Cutter, I Xerox workstation. The purchase of this equipment will improve the productivity and personnel administration, public works facility support, computer and data processing support, and security operations. Items of equipment under \$1M include a wide variety of industrial plant, civil engineering support, office and ADP generator, 1 Applicon Graphics Terminal, 1 card duplicating system, 1 simulation computer, 1 conformal coating system, 1 90 ton/147' boom PW crane, various other PW trucks and forklifts, 1 Random Vibration system, 2 milling machines, 1 Temperature chamber, 1 vertical contouring band saw, 1 electrostatic color plotter, 1 NOYAG-LASER-Pump with Harmonic

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IF-ACP2

ASSET CADITALIZATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	ALIZATION PROGRAM JUST (Dollars in Thousands)	GRAM JUS	STIFICAT 1)	TON SHEE	£.			A. BU	BUDGET SUBMISSION FY 1990/1991 PRESIDENT'S BIENNIAL	MISSION 91 PRES	IDENT'S	
B. Industrial Fund/Activity Group/Activity	Activity	<u>.</u>			ს — -	C. ACP-1 Line No. E Item Description	ne No.	Item	escripti	e e		
MIF/Aeronautical Engineering Centers/WAC/NAEC	enters/N.	AC/NAEC				A008 - Minor Construction	linor Cor	ıstructi	u o			
		FY 1988			FY 1989			FY 1990			FY 1991	
E. SMENTS OF COST	Ouant	Unit	Unit   Total	Unit   Total	Unit		6	Unit	Onant   Unit   Total     Unit   Total	4 4 4 4	Unit	Unit   Total
				_								
End Items			1,440			2,000			1,500			2,300
											·	
	~ .	~ .										_

The AECs are comprised of two activities; Naval Avionics Center is one large building covering over 11 acres while Naval hazardous storage facilities, parking lot repair, security fencing, ventilation improvements, replacement of 3 underground equipment, and various other office/workspace renovations/expansions, fire protection improvements, electronic warfare lab, Air Engineering Center is comprised of 307 buildings on over 7340 acres. Minor Construction projects in support of these facilities include contract and in-house efforts as follows: installation of surge control valve in fire main, several fuel tanks, installation of emergency power generators, installation of air/conditioning systems in support of computer cockpit display simulation lab, alterations B/3000, T-6 elevator, and computer room.

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	TION PRO	GRAM JUS	TIFICAT	ION SHEE	F			A. B.	BUDGET SUBMISSION	MISSION		
( Po 1 1	(Dollars in Thousands)	porsend	=					E	FY 1990/1991 PRESIDENT'S RIEMMIAL	91 PRES	IDENT'S	
B. Industrial Fund/Activity Group/Activity	/Activit				ن -	ACP-1 L	C. ACP-1 Line No. & Item Description	I I	escript	uoj		
NIF/Aeronautical Engineering Centers/MAEC	enters/N	V <b>E</b> C				A009 - 1	A009 - RAMP MIS					
		FY 1988			FY 1989			FY 1990			FY 1991	
FIRMENTS OF COST	0	Unit	Unit   Total	1	Unit   Total	Total	Unit   Total   Unit   Total     Unit   Total     Unit   Total     Unit   Total     Unit   Total     Unit   Total     Unit   Un	Unit	Unit   Total		Unit	Unit   Total
	_											
End Items									1,000			1,610
				- <del>-</del>								
	_	_		_	_	_	_				_	_
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	_	_		_	_			_			_	
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proposed software will be utilized to design an interface between RAMP and existing financial management and material tracking a future need for rapid acquisition of low quantity demand repair parts at both a reduced lead time and reduced cost. Under current conditions, the Mavy Supply System's average response time to orders for unusual or outdated parts is 300 days from The Rapid Acquisition of Manufactured Parts (RAMP) Facility is a Navy project which integrates automated manufacturing, robotics, computer-based management, and telecommunications techniques into a fully functional, flexible system capable of producing parts on demand. It will greatly improve performance by decreasing response time to fleet needs for spare or emergency repair parts which otherwise may not be available in suppliers' inventories. The Navy has both a current and to delivery. Under the proposed RAMP Program, the response time from demand to delivery is projected at 30 days. The systems.

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	TION PRO	GRAM JU	STIFICAT	ION SHEET				A. BU	A. BUDGET SUBMISSION	MISSION		
(1001)	(Dollars in Thousands)	puesnou	â					E -	1990/19	FY 1990/1991 PRESIDENT'S	(DENT'S	
B. Industrial Fund/Activity Group/Activity	/Activit	<b>,</b>			ن 	C. ACP-1 Line No. & Item Description	ne No.	it it	bescript:	lon		
MIF/Aeronautical Engineering Centers	enters					A010 - Management Info Sys Under \$1M	lanageme	nt Info	Sys Unde	r \$1M		
		FY 1988		 	FY 1989			FY 1990			FY 1991	
ESCO NO SENSINATE	# # # # # # # # # # # # # # # # # # #	Unit	Unit   Total	Unit   Total   Unit   Total   Ouant   Cost   Cost	Unit		1	Unit	Unit   Total	a di di	Unit	Unit   Total
										7		
End Items			6,277			400			1 567			709
	_	_	_	_	_	_		_	_	_	_	

System (MIS) is planned for development which will be PC-Based and allow user to interface with mainframe data base which will overloaded. Due to the resource overload, large delays are experience between the time the user submits a computing request Supply Department Automation Corporate Goal. The computing resources currently available in the DSMAC and DCSSC are heavily being performed due to the unavailability of computer resources. Also, A Prototype Executive Level Management Information capability of the DCSSC resources will be exceeded in the first quarter of Fiscal Year 1989. This will result in work not and the time that the request is processed. Many manhours are being lost waiting for computing resources, and the number The Distributed CCF procurement strategy is to acquire additional computing resources from the seven year contract as dictated by the Center's workload. In accordance with the Corporate Computer Resources Plan, additional Distributed CCF System (SAHRS), the Avionics Manufacturing Excellence (AME) Program, Shop Floor Data Collection System (SFDCS), and the satellite minicomputers are required to support the Digital Scene Matching Area Correlator (DSMAC), Conventional Strike Support Center (DCSSC), the Cains Navigation Software Support Activity (SSA), the Standard Altitude Heading Reference and complexity of the DSMAC and DCSSC processing requests is growing rapidly. It is estimated that the processing continue preliminary Systems Requirements & Systems Design.

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DEPARTMENT OF THE MAY
MAY INDUSTRIAL FUND
ASSET CAPITALISATION PROGRAM
FT 1990/1991 FRESIDENT'S BIRMHIAL BUDGET
(Dollars in Millions)

		2	FY 1988	FY	FY 1989	FY	FY 1990	FY.	FY 1991
Line	[ Item	_	Total	_	Total	_	Total		Total
Number	Description	Quant	Cost	Quant   Cost	Cost	Quant   Cost	Cost	Quent	C084
B001	Command Local Area Metwork		1 2.2		1.0		6.0		3.0
B002	Fuel Farm Tanks		*. 		1.2				
B003	Anechoic Chambers						6.4		
	Total ACP Equipment Costing   \$1M or More	<b>-</b>	2.6		2.2		0.		3.0
8004	CALS Modules								1: -
B005	EDMICS Modernigation								2.6
	Total Specific Modernization   Initiatives \$1M or Over	_ ~	<b>-</b>						3.7
9008	CAD/CAM Equipment		1:0						1.0
	Total CAD/CAM Equipment Costing   \$1M or More		1.0					- <b>-</b> -	1.0
B007	Electronic Warfare Software Engr   Envir (EWSEE)		1.7		- <b></b>				<del>-</del>
	   Total Major ADP Equip/Sys Over \$1M   		1.7						
		· <b>-</b> ·	. <b></b> .	· <del>-</del>		. <b></b>		~ .	. <b>_</b>
				1.0				IF EXHIBIT ACP-1 Page 1 of 2	IT ACP

MAYAL AIR TEST CEPTERS
DEPARTMENT OF THE MAY
MAY INDUSTRIAL FUND
ASSET CAPTALIZATION PROGRAM
FT 1996/1991 PRESIDENT'S BIRMIAL SUDGET
(Dollars in Millions)

	Item	_	Total	_	Total	_	Total		
			4			_			TOTAL
	Description	Quant   Cost 	7000	Quant   Cost	Cost	Quant	Quant   Cost	Quant	Quant   Cost
	Equipment Under \$1M		5.6		1.9				•••
- 600g	Minor Construction		<b>7:</b>		<b>.</b>		•. 		•. 
B010 	Total Management Information System Under \$1M		· .						
	Total Program		13.0		4.7		9.8		- 6 -
			·						
·		- <del>-</del> ·							
									. <b>_</b> .
		1						IF EXHIBIT ACP-1	IT ACP-
				<b>₩</b>				Page 2 of 2	of 2

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	ALIEATION PROGRAM JUST (Dollars in Thousands)	Thousand	STIFICAT le)	TON SHEE				4 -	A. BUDGET SUBMISSION FY 1990/1991 PRESIDENT'S	MISSION 191 PRES	IDENT'S	
		ļ	ļ						BIENNIAL			
B. Industrial Pund/Activity Group/Activity	1 <b>p/A</b> ctivi	<b>.</b>			<u>.</u>	ACP-1 L	ne No.	a Item	C. ACP-1 Line No. a Item Description	uoı		
MIF/Air Test Centers/AIC						B001 - (	Command	Local A	B001 - Command Local Area Metwork	#		
		FY 1988	60		FY 1969			FY 1990			FY 1991	
	_	Unit	Unit   Total		Unit	Unit   Total		Unit	Unit   Total	$\int_{-}$	Unit	Unit   Total
ELEMENTS OF COST	Quant	Cost	Quant   Cost   Cost   Quant   Cost   Cost   Quant   Cost   Total   Quant   Cost   Cost	Quant	Cost	Cost	Quant	Cost	Total	Quant	Cost	Cost
	_	_	_		_			_		_		
Hardware and Installation	_	_	1 2,200	_	_	1,000		_	4,000		_	3,000
	_	_	_	_	_	_		_	_	_	_	
	_	_	_	_	_	_		_	_		_	
	_	_	_	_	_			_	_		_	
	_	_	_	_	_			_	_		_	
	_	_	_	_	_	_		_	_	_	_	
	4										L	

test and messurement equipment, telemetry and instrumentation systems, video, and audio systems and workstations supporting centralized main-frame processors, CAE/CAD/CAM systems, avionics integrated Weapon Systems Simulation Laboratories (WSSLs), resources at the Center. Overall, PACMISTESTCEN has a mission dependent need for a comprehensive CLAN capability that can support a variety of data, video, and audio applications. This need for extensive additional data communication resources per-capita productivity, however high data rate interconnections are needed to achieve sharing of information and computer both technical and administrative activities. These systems provide data reduction monitoring, control, data collection, address systems and public view electronic bulletin boards. These systems individually show significant improvements in surveillance, non-administrative closed-circuit audio and video links, distribution of training material, audio public PACMISTESTEE is introducing many automated information resources to enhance mission effectiveness such as large PACMISTESTEEM include teleconferencing, high data rate transfers between major processors, long-haul electronic data capable of interconnecting these distributed users to this extensive computing power can be satisfied by the CLAM. project management, status, technical reporting, and financial management. Other communications requirements at transfers, DDN communications, centralized environmental control, remote electronic access control, remote video

IF-ACP2 Page 1 of 9

Unit   Total	 as the date by which all ment can be double— with daily tank inventory, , as the enforcement serground tanks with ted in an environmentally local underground tank 1989 will result in the Venture County	IF-ACP2
Quant		
Total	trict wips as unips as unips as unips as unips as under or unips as unips a	
Unit	 ly with strictenary 1989 a section equipment alled tanks we have been been been been been been been be	

PY 1991

FY 1990

FY 1989

FY 1988

Unit | Total

| Unit | Total Cost

Cost

Cost

Cost

1,150

450

Underground Hazardous Substance

Storage Tanks

ELEMENTS OF COST

B002 - Fuel Farm Tanker - Main Base

ACP-1 Line No. & Item Description

j

PY 1990/1991 PRESIDENT'S BUDGET SUBMISSION

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET

(Dollars in Thousands)

Industrial Fund/Activity Group/Activity

MIF/Air Test Centers/ATC

BIEHNIAL

Marrative Justification:

ory, ng 11 7, double-walled tanks and sensors. Their reason for making this ruling is that PACMISTESTION is loc regulations. This law includes underground fuel storage tanks. The law establishes I January 19 underground tanks have permanent leak detection equipment installed. Permanent leak detection eq yearly pressure testing, and groundwater monitoring. Ventura County environmental Health Departm sensitive area with the lagoon and coastline. PACMISTESTCEN's commitment to comply with State am regulations will require command support and funding. Failure to comply with the law by 1 Januar walled underground tanks with a leak detection sensor between the two walls; or single-walled tan California law requires that all underground tanks storing hazardous substances comply with s agency for these regulations, has required that PACMISTESTCEN replace all existing single-walled closure of underground tanks and a severe impact on operations. PACMISTESTCEN has been notified Environmental Health Department that there will be no exceptions to this deadline.

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	IZATION PRO	GRAM JU	STIFICAT	TON SHEET				A. B	A. BUDGET SUBMISSION	BMISSION		
<b>a</b> )	(Dollars in Thousands)	housend	-					E 	FY 1990/1991 PRESIDENT'S BIENNIAL	991 PRES	IDENT'S	
B. Industrial Fund/Activity Group/Activity	ou <b>p/A</b> ctivit	*		•	ပ် — -	C. ACP-1 Line No. & Item Description	ine No.	f Itom	Descript	u oj		
MIF/Air Test Centers/ATC						8003 - Anechoic Chambers	<b>me</b> choic	Chamber	<b>.</b>			
		FY 1988	80		FY 1989			FY 1990			FY 1991	
	-	Unit	Unit   Total	_	Unit	Unit   Total		Unit	Unit   Total		Unit	Unit   Total
ELEMENTS OF COST	Quant	Cost	Quant   Cost   Quant   Cost   Cost   Quant   Cost   Total   Quant   Cost   Cost	Quant	Cost	Cost	Quent	Cost	Total	Quant	Cost	Cost
	_	_	_	_	_	_	_	_		_	_	
Anechoic Chambers	-		_	_	_	_		_	4,000	_	_	_
		_	_	_	_	_	_	_		_	_	_
	_		_		_	_	_	_	_	_	_	
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		_		_		_		_	_	_	_	_
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of the microwave anechoic chamber, and microwave instrumentation including microwave sources, receiver, antennas, waveguides, cables, and associated equipment. Programs supported include low observable program, TOMAHAWK, AMBAAM, AIWS, AAAM, SLAT and and processing computer system with peripherals, radar absorbing equipment for target handling and target support equipment section with the use of a compact range reflector system. The Anechoic Test Chambers facility includes a data acquisition Anechoic Test Chambers provide the PACMISTESTCEN with a facility for the measurement of low observable radar cross

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	ALIZATION PROGRAM JUST (Dollars in Thousands)	XGRAM JU Thousand	STIFICAT a)	NOI SHEE	Ħ			⊼ 	BUDGET SUBMISSION FY 1990/1991 PRESIDENT'S BIENNIAL	AMISSION 191 PRES	(Dent's	
B. Industrial Fund/Activity Group/Activity	oup/Activi	. <del>.</del>			ن 	ACP-1 L	ine No.	f Ites	C. ACP-1 Line No. & Item Description	uoj		
MIF/Air Test Centers/ATC						B004 -	B004 - CALS Modules	10.10.8				
		FY 1988	80		FY 1989			FY 1990			FY 1991	
	-	Unit	Unit   Total		Unit	Unit   Total		Unit	Unit   Total		Unit   Total	Total
ELEMENTS OF COST	Quant	Cost	Quant   Cost   Cost   Quant   Cost   Cost   Quant   Cost   Cost   Cost   Cost	Quent	Coat	Cost	Quant	Cost	Total	Quent	Cost	Cost
	_	_	_	_	_	_	_				_	
CAL Modules	_	_	_	_	_	_	_	_	_	7	_	1,100
	_	_	_	_	_	_	_		_	_	<u>-</u> -	
	_	_	_	_	_	_	_	_			_	
	_	_	_		_	_	_	_	_	_	_	
	_	_	_	_	_	_	_	_	_	_	_	
	_	_	_	_		_	_	_	_	_	_	
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and emerging communications and computer aided technologies to improve the productivity, quality, and timeliness of logistics (5) reducing the quantity of technical paperwork needed to develop, acquire support, and maintain weapon systems. Benefits include quicker, more efficient procurement of spares, more efficient maintenance of operations systems; and more effective The DoD mandated Computer Aided Acquisition and Logistic Support (CALS) system requires CAM/CAM capability to automate Management Information and Control System), automated technical manuals and orders, automated contracting, diagnostics and design process to produce weapon systems that are more reliable and easier to support and maintain; (2) applying existing logistic planning and management of systems. This equipment will eventually be integrated with EDMICS (Engineering Data support; (3) integrating processes to create, store, retrieve, use, and distribution of logistic support products, and the engineering design and weapon system development process. CALS objectives include: (1) actively influencing the testing, provisioning, etc.

Industrial Fund/Activity Group/Activity  WIF/Air Test Centers/ATC    FY 1988	986	FY 1989	C. ACP-1 Line No. & Item Description B005 - EDMICS Modernization 1989   FY 1990	DMICS Mo	r Item D	FY 1990/1991 PRESIDENT'S BIENNIAL Description Estion	91 PRES	IDENT'S	
Group/Activity	886	- C.	ACP-1 Li	ne No. 6	i Item D	escripti tion	80		
		FY 190	8005 - 12	DMICS No	dernisa	tion			
FY 1	986	FY 190	68						
nu l		Unit			FY 1990			FY 1991	
ELEMENTS OF COST   Quant   Cos	Unit   Total     Unit   Total     Unit   Total   Unit   Total   Quant   Total   Quant   Cost   Cos	ant Cost	Unit   Total   Cost   Cost	Quent	Unit   Total	Total Total	Quant	Unit   Total	Total Cost
Engineering Date Management									
Information and Control Systems		- <b>-</b>							
Modernization (EDMICS)	<u> </u>	_	_	_	_	_		_	2,600
_	<u> </u>	-	_	_	_	_		_	
_	-		_	_	_	_		_	
_	_	-	<del>-</del>	_	_	_		_	
	,	1	1						

initiatire, whose goal is to improve the accuracy, timeliness and use of logistic technical information; (3) the increased inventory; (5) escalating costs of managing engineering dats; and (6) the advent of new technology for high volume storage quentity of engineering drawings as result of the introduction of highly complex weapon systems and equipment into Mavy and retrieval of digital data. The objective of engineering data management automation is to provide the capability to EDMICS PACMISTESTCEM is identified as one of the sites that require DoD mandated EDMICS installation to support the Congressional direction to improve management of technical information; (2) the Computer Aided Logistics Support (CALS) emphasis on competitive acquisition of spare parts under such programs as Buy Our Spares Smart (BOSS); (4) the growing acquisition, storage, retrieval, and dissemination of logistics technical information in digital form for major weapon automated technical manuals and orders, automated technical manuals and orders, automated contracting, diagnostics and meet ever-increasing demand for engineering data through more efficient resource usage while significantly improving systems. The need for such a system to manage engineering data within the Navy is driven by several factors: (1) response time for both logistics and procurement support. This system eventually will be integrated with CAD/CAM, testing, provisioning, etc.

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ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	ATION PRO	GRAM JUS	STIFICAT	TON SHEE				A. Bt	A. BUDGET SUBMISSION	MISSION		
(Pot)	(Dollars in Thousands)	housand	ŝ					E	BIENWIAL.	FY 1990/1991 PRESIDENT'S BIENNIAL	(DENT'S	
B. Industrial Fund/Activity Group/Activity	p/Activit	>-		1	ن 	C. ACP-1 Line Mo. & Item Description	ne No.	rtem f	Sescript.	ion		
MIF/Air Test Centers/AIC						B006 - 0	B006 - CAD/CAM Equipment	Equipmen	ų,			
		FY 1988			FY 1989			FY 1990			FY 1991	
ELENENTS OF COST	Quent	Unit   Total		Quant	Unit	Unit   Total   Cost   Cost	Quant	Unit	Unit   Total	Unit   Total   Unit   Total     Quant   Cost   Total   Quant	Unit   Total	Total
CAD/CAM Equipment			1,000									1,044
							_					
							<del></del>	- <del>-</del>				

efficient procurement of spares, more efficient maintenance of operational systems, and more effective logistic planning and management of systems. This equipment will eventually be integrated with EDMICS system (B005), automated technical manuals, also greatly reduce the quantity of technical paperwork involved in logistics support. Benefits also include quicker, more The CAD/CAM system will automate the preparation, storage and retrieval of technical engineering drawings. The CAD/CAM will influence the design process to produce weapon systems that are more reliable and easier to maintain. The system will and other logistics support systems.

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ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	NLIZATION PROGRAM JUST (Dollars in Thousands)	SRAM JUS Sousands	TIFICATI	ON SHEET				A .	BUDGET SUBMISSION FY 1990/1991 PRESIDENT'S BIENNIAL	MISSION 991 PRES	(DENT'S	
B. Industrial Fund/Activity Group/Activity	p/Activity				ن ا – -	C. ACP-1 Line No. & Item Description	ne No.	E Item	Descript	lon		
NIF/Air Test Centers/AIC						B007 - E	W Softw	are Engi	8007 - EW Software Engineer Environment	vironmen'		
		FY 1988			FY 1989			FY 1990			FY 1991	
ELEMENTS OF COST	Quant	Unit   Total Quant   Cost   Cost	1 1	Unit   Total   Quant   Cost   Cost	Unit	Unit   Total   Cost   Cost	Quant	Unit	Unit   Total     Quant   Cost   Total	Unit   Total   Quant   Cost   Cost	Unit   Total	Total
Electronic Warfare Software		 										
Engineer Environment (EWSEE)	<b>-</b> -		1,700									
	_ ~											

the tatiral computer programs, and an increasing paper burden, a system to automate the majority of the life cycle functions with tactical computer programs, including program development, test and maintenance. This procurement includes completion associated with these programs is required. The EWSEE is a turnkey system to automate the life cycle functions associated of the software implementation and integration of the turnkey system, a secure communications processor to be connected to PACMISTESTEEN is designated by NAVAIRSYSCOM as the System Software Support Activity (SSSA) for the F-14A/D, EA-6B, and development, test, integration, and maintenance for those programs. Due to manpower shortages, increasing complexity of the EWSEE computer which will provide the capability for a secure communications environment within EWSEE, a VAX 8700several other EW computer programs. As such, PACMISTESTCEN is required to support and/or provide the software system compatible computer and peripherals, which will be used for real-time processing of program and simulation data.

C. ACP-1 Line No. & Item Description   C. ACP-1 Line No. & Item Description   Bull   Bull	FY 1989	C. ACP-1 Li	ACP-1 Line No. & Item Describates of the School of the Sch	C. ACP-1 Line No. & Item Description  B008 - Equipment Under \$1M  1989   FY 1990	n ii –		
	Land	8008 - E	quipment Ur	1990	_		
COST	FY 1.	989	14	1990	-		
COST	in	t   Total				FY 1991	
	uant   Cos	t Cost	Quant   Co	Unit   Total	Quant	Unit   Total	Total Cost
		1,900					800

Standard Modular Instrumentation System (SMIS). The SMIS upgrade meets the basic upgrade needs of the F-14, HARM Integration, IRST, AAAM, SPARROW, and PHOENIX programs. The SMIS upgrade will reduce cost per flight, provide 1.5 times the capability of Support Equipment including trucks, tractors and welding equipment, an optical processor, STAFS archiving equipment, graphics PACMISTESTEEN is major test and evaluation facility supporting complex naval weapon systems. High technology and other test equipment. Also, six aircraft-28 track recorders, one ground station-28 track and playback unit, six aircraft TID/DD critical mission requirements and to achieve the ten year goal. Equipment purchases include 47 items of Civil Engineering workstation with display, microcomputers, infrared and microwave spectrum radios, and various other general office ADP and mission recorder and associated video recorder and six telemetry transmitters with encryptors is required to upgrade the equipment is required to support this mission. Changing technology has dictated a goal of a ten year average life of equipment. Currently, the average life is 13.6 years. PACMISTESTCEN is purchasing ACP equipment items to satisfy the existing recorders and increase its reliability to the Navy.

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ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	ZATION PRO	GRAM JUS	STIFICAT	TON SHEET				¥ .	UDGET SU	A. BUDGET SUBMISSION		
( De	(Dollars in Thousands)	housand	<u>.</u>					<u>.</u>	Y 1990/19 BIENNIAL	FY 1990/1991 PRESIDENT'S BIENNIAL	IDENT'S	
B. Industrial Fund/Activity Group/Activity	up/Activit	Α.			ن 	ACP-1 L	C. ACP-1 Line No. & Item Description	i Item	Descript	10n		
MIF/Air Test Centers/AIC					_ <b>_</b> -	B009 - 1	B009 - Minor Construction	nstruct	ion			
	 	FY 1988			FY 1989			FY 1990			FY 1991	
	-	Unit	Unit   Total		Unit	Unit   Total		Unit	Unit   Total	_	Unit   Total	Total
ELEMENTS OF COST	Quant	Cost	Cost	Quant	Cost	Cost	Quant	Cost	Total	Quant   Cost   Cost   Quant   Cost   Cost   Quant   Cost   Total   Quant   Cost   Cost	Cost	Cost
			-			900			-			
Timor competence	- <b>-</b>		00*.1			0			99			9
	_			_	_					. <u>-</u>	- - <del>-</del>	
	_	_	_		_		_	_	_	_	_	
	_	_	_	_	_			_	_	_	_	
	_	_	_	_	_		_	_	_	_	_	
					7				_	7	,	_

absorbing material installation, one handicap elevator installation, and a secure data analysis room in the Weapons | Evaluation Directorate. The program also includes a number of office and shop renovations to improve substandard workspaces. PACMISTESTCEN is a large test and evaluation facility comprised of 894 buildings on over 29,000 cares. The Minor Construction efforts in support of these facilities in PY 1989 include OSHA required ventilation improvements and sound

MILITARY SEALIFY COMMAND
DEPARTMENT OF THE MAY
HAVY INDUSTRIAL FUND
ASSET CAPITALIZATION PROGRAM
FY 1990/1991 PRESIDENT'S BIENHIAL BUDGEY
(Dollars in Millions)

		PY	FY 1988	FY 1	FY 1989	FY	FY 1990	FY	FY 1991
Line	Item	_	Total	_	Total	_	Total	_	Total
Number	Description	Quant	Quant   Cost	Quant   Cost	Cost	Quant   Cost	Cost	Quant	Cost
C001	Equipment Under \$1M		1 2.0		0.5		0.7		r. 0
	   Sub-total Equipment 		2.0	<b>-</b>	o 		0.7		- 1 0.7
C002	   Minor Construction	<b></b> -	0.0		0.2		0.7		
	Sub-total MCON		0.0		0.5		0.1		
C003	Sealift Information								
	Database (SID)		1.5						
C004	Engineering Admin								
	   System (EASY) 		1.2			~			
C005	Sealift Supply								
	System (SEASUP)		~	~	1:1				~
9000	other AIS Under \$1M	~ - ·	1.9		2.7		3.6		3.2
	Sub-total AIS	~	 6.4		es.		3.6		3.2
	GRAND TOTAL ACP		9.9		4.5		4.		3.9
				29				IF EXHIBIT ACP-1	IT ACP-1

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TISSY	CAPITALIEA	TION PROGRA	ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	OF SHRET		- ×	BUDGET SUBMISSION	MISSION	
_	(Pe11	(Dollars in Thousands)	sands)			-	FY 1990/15	FY 1990/1991 PRESIDENT'S	- s.E
						-	BIENNIAL		
B. Industrial Fund/Activity Group/Activity	vity Group/	Activity			c. 4c	C. ACP-1 Line No. & Item Description	& Item Des	scription	
NIP/MILITARY SEALIFT COMMAND/MSC	COMPLAND/MS	U				C001 Equipment Under \$1 Million	t Under \$1	Million	
		FY 1989			FY 1990			1661 Ad	
SLEHENTS OF COST	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Quantity  Unit Cost   Total Cost  Quantity  Unit Cost   Total Cost  Quantity  Unit Cost	Quantity	Unit Cost	Total Cost
Containers	- <del>-</del> -	26.5	400	 12 	26.7	559	70	26.5	530
   Office/Other Equipment								_ = -	
Computer Equipment			16 –		- <b></b>	100	<del>-</del>		150
   Total			491		<b>-</b> -	629			680
			·	 	- <b></b>				
				1	].		_		

Marrative Justification:

In all years the majority of ACP equipment funding is used to procure containers for the MPS and Cargo programs. ADP items relate to MSC's goal to upgrade its information systems capability. This effort is manifested by the combined efforts of MSC and NAVDAC to develop an overall information System which will link all components - e.g., COMNET.

-							
	(bollars in Thousands)	ads)	•	<b>i</b> 	FY 1990/1991 PRES	FY 1990/1991 PRESIDENT'S	8,1
					BIENNIAL		
B. Industrial Fund/Activity Group/Activity	vity Group/Activity		lc. vc	ACP-1 Line No. & Item Description	& Item Des	cription	
NIF/MILITARY SEALIFT COMPAND/MSC	COMMAND/MSC			C002 Minor Construction	onstruction		
	FY 1989		FY 1990			FY 1991	
ELEMENTS OF COST	Quantity  Unit Cost   Total Cost  Quantity  Unit Cost   Total Cost  Quantity  Unit Cost   Total Cost	Total Cost  Quanti	ty Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Computer Center		200					
Men's Lavatory						<del>-</del> -	
Warehouse Renovation				100			
Engineering Annex							
Total		200.0		100			0
		~					
Narrative Justification:							
Construction efforts	Construction efforts are to cover habitability improvements at MSC area command in Oakland California.	ity improvements a	it MSC area com	wand in Oaklar	nd Califorr	ıia.	

ASSET	CAPITALIZA	ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	I JUSTIFICATI	TON SEELET		¥ -	BUDGET SUBMISSION	BMISSION	
	(00)	(Dollars in Thousands)	(spue)			_	FY 1990/1	FY 1990/1991 PRESIDENT'S	NT'S
							BIENNIAL	ij	
B. Industrial Fund/Activity Group/Activity	vity Group,	/Activity			C. AC	ACP-1 Line No. & Item Description	E Item De	scription	
CANADA CRALITY CONTRACTOR		Ų				40.00	:		É
	-	300				(Anguar) seasons of anguary systems con-	Ke Avddne	BLOM (SEASO	
		F1 1969			FY 1990			FY 1991	
ELEMENTS OF COST	Quantity		Unit Cost   Total Cost  Quantity   Unit Cost	Quantity	Unit Cost	Total Cost  Quantity	Quantity	Unit Cost	Unit Cost   Total Cost
SEASUP	<u>-</u> -		1.107						
				- <del>-</del>	-				
Total			1,070		•		. <u>-</u> .		. <u>-</u> .
_	_		_	_	_				
					<del>-</del>				
					_		- 		
	-	_	_		_	_	_		_
	_	_	_	_	_	_	_		_
				7					
Narrative Justification:									
   SEASUP will provide automated support to shoreside supply functions, material procurement management which includes	automated	support to s	shoreside sup	oply function	ons, materia	nl procuremen	t manageme	nt which in	cludes
requisition processing and demand reporting, CASREP monitoring, warehouse management, supply personnel school administration,	and demand	reporting, (	CASREP monito	oring, warel	house manage	ement, supply	personnel	school adm	linistration,
			) ;		3	76, 5111	•		
									IF-ACP2

ASSET	CAPITALIE	ATION PROGRA	ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHERT	ON SHEET		- A	BUDGET SUBMISSION	BMISSION	
	(Doll)	(Dollars in Thousands)	sands)			_	FY 1990/1	FY 1990/1991 PRESIDENT'S	E'S
						_	BIENNIAL		
B. Industrial Fund/Activity Group/Activity	vity Group/	Activity			c. Ac	C. ACP-1 Line No. & Item Description	& Item De	scription	
NIF/HILITARY SEALIFT COMMAND/MSC	COMMAND/MS	<u>u</u>				C006 Other AIS Under \$1 Million	Under \$1	Million	
		FY 1989			FY 1990			FY 1991	
ELEMENTS OF COST	Quantity	Unit Cost	Quantity  Unit Cost   Total Cost  Quantity  Unit Cost   Total Cost  Quantity  Unit Cost   Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Various Information			2,669	 		3,594			3,179
Systems									
Total			2,669		~	3,594			3,179
					-		. –	-	
				- ~ - ~					
	_			_	_		_	_	
					<b></b>				
-									

Architecture which describes total MSC information requirements and defines specific information systems projects for development. Overall a total of 19 individual information systems have been identified for development. These systems correspond to specific shoreside functions within MSC and shipboard information requirements which interface with the The remaining systems under development - e.g., MEDIF, SMIS, COMNET, FLEET - are all based on a Target Information shoreside systems.

MANY MEGICHAL DATA AUTOMATION CHERSS
DEPARTMENT OF THE MANY
MANY INDUSTRIAL FUND
ASSET CAPITALISATION PROGRAM
FY 1990/1991 FRESIDENT'S BIRNHIAL SUDGEY
(Dollars in Millions)

		A.	FY 1988	PY	FY 1989	FY	FY 1990	2.2	FY 1991
Line	Item	_	Total		Total	1	Total	_	Total
Number	Description	Quent	Cost	Quant	Cost	Quant	Cost	Quant	Cost
	A. Equipment Costing Over \$1M								
1000	CPU Purchase	7	4.3				1 3.2	- 	- - 3.8
D002	18M 3081		1.1			<b></b>			
D003	Sherry 8481 Disk Drive			<b>-</b>	1:1	<b></b>	<b>-</b> - ·		
D004	Masstor Backup System								1.3
	Total A Subtotal		5.4		1:1		3.2		5.1
	B. Specific Modernization   Initiatives								
5000	Data Processing Installation								
	Equipment Transition		~- ·		0.9		1.2		6.2
	Category B Subtotal				9.9	<u> </u>	7.2		6.2
	C. New/Expanded Techniques	<del>-</del>			<i></i> .	_ <u>_</u> .	· · · ·	<b>.</b>	~- ~-·
9000	IDAFIPS Processors				. e.s		5.2		•; 
	   Category C Subtotal				6.2		5.2		• • • • • • • • • • • • • • • • • • •
_									
								IF EXHIBIT ACP-1	IT ACP-1
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MAPT REGIONAL DATA AUTOMATION CRETERS
DEPARTMENT OF THE MAVY
MAY INDUSTRIAL FUND
ASSET CAPITALIZATION PROGRAM
FY 1990/1991 PRESIDENT'S BIRMTAL BUDGET
(Dollars in Hillions)

Pactiption   Quant   Cost   Quant		_	2	FY 1988	FY	FY 1989	FY	FY 1990	77	FY 1991
P. Other Equipment Costing Less	Line	Item	_	Total		Total		Total	_	Total
F. Other Equipment Costing Less than \$1M	Number	Description	Quent	Cost	ouant	Cost	Quent	Cost	Quent	Cost
than 51M  Other Equipment Costing Less than 51M  Category F Subtotal  Navy Regional Data  Automation Centers Total  16.4   13.7   15.9		í								
than \$1M  Category F Subtotal   11.0   0.4   0.3  Navy Regional Data Automation Centers Total   16.4   13.7   15.9		than \$1M								
# Subtotal   11.0   0.4   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.4   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3   0.3	D007	Other Equipment Costing Less						-		
Frotal   16.4   13.7   15.9		than \$1M		0.11.1		4.0		6.0		1.3
rs Total   16.4   13.7   15.9		Category F Subtotal	-	11.0		0.4		0.3		1.3
rs Total   16.4   13.7   15.9		Navy Regions] Date								
		Automation Centers Total		16.4		13.7	-	15.9		16.6
		_	_	_	_	_	_	_	_	_
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ASSET CAPITA	ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	SERAM JU	STIFICAT 8)	ION SHEE	f			 	A. BUDGET SURMISSION FY 1990/1991 PRESIDENT'S	BMISSION 991 PRES	IDENT'S	
									BIENNIAL	د		
B. Industrial Fund/Activity Group/Activity	rou <b>p/Activi</b> t	<b>&gt;</b> +			່ <u>ບ່</u> — -	C. ACP-1 Line No. & Item Description	ine No.	f Item	Descript	ton		
NIF/Havy Regional Data Automation Centers/NARDAC	ometion Cent	ers/NAR	DAC		- <del>-</del> -	D001 - CPU Purchases	CPU Purc	hases				
		FY 1988			FY 1989	6		FY 1990			FY 1991	
TSOO NO STREAMENTS		Unit	Unit   Total		Unit	Unit   Total     Unit   Total     Unit   Total     Unit   Total     Unit   Total		Unit	Unit   Total		Unit   Total	Total
	_	_				_				המשור		200
CPU	~ .	12,157	2,157   4,314	•	- <b></b> .			13,172	3,172   3,172		1  3,802   3,802	3,802
						_ <b>_</b>						
			- <b>-</b>									
	_	_	_	_	_	_		_	_		_	
	<del></del> -						_			_	_	_
								_		_		

Purchase of 1100/90 CPUs will be required at four MARDACs to ensure that Mavy customer's are being provided with the most projected to be at 100% capacity in April 1989; increased workload after that point requires the 1100/90. In FY 1991, increased workload for NALC/NADEP systems such as NIPMS, NIPMS and WCS drive the requirement for an 1100/90 systems at NARDAC effective up-to-date ADP technology. Current 1100/70 systems do not have sufficient capacity for projected workload; space system, which supports NADEP, NRFC, Portsmouth Maval Shipyard and COMMAVDAC, is currently at 70% capacity. This system is limitations also necessitate the purchase of 1100/90's vice upgrades of 1100/70 systems. NARDAC Jacksonville's 1100/70 Pensacola.

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- ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHRET	PROM PRO	GRAN JUS	TIFICAT	TON SHEE	£			A. BI	JDGET SU	BUDGET SUBMISSION		
( Dolla	re in 1	(Dollars in Thousands)	=						r 1990/19	FY 1990/1991 PRESIDENT'S	IDENT'S	
B. Industrial Fund/Activity Group/Activity	Activit	\ \*			ن -	ACP-1 L	ACP-1 Line No.	f Item	f Item Description	l e l		
HIP/Mavy Regional Data Automation Canters/MARDAC	ion Cent	ers/Rari	S <b>Y</b> C			D003 -	D003 - Sperry 8481 Disk Drive	481 Disi	k Drive			
		FY 1988			FY 1989	6		FY 1990			FY 1991	
ELEMENTS OF COST	Quent	Unit	Unit   Total	- Quant	Unit	Unit   Total	ouent	Gost	Unit   Total	Ouent	Unit	Total
8481 Disk Drive					1,082	( <del>-</del> -						
				- <b>-</b>	~ -	~ ~						
		1								<u>-</u>		
Marrative Justification:						-						
PNS222 Sperry Disk Equipment 8481 disk purchase is required in order to gain sufficient disk capacity to support increased workload resulting from implementation of Financial Reporting System and expansion of Navy Integrated Training and Desantra Administrative coetem	3481 dis	k purchs tation c	ise is r of Finan	equired cial Rep	in orde	r to gai: System an	n suffic nd expan	ient di; sion of	sk capac Navy In	ity to si tegrated	upport Træinir	<u>ā</u>

B. Industrial Fund/Activity Group/Activity	100	ļ	(Dollars in Thousands)		Ì			_	FY 1990/1991 PRESIDENT'S BIENNIAL	FY 1990/1991 PRES	SIDERT'S	
	/ACCIVICY				<u>:</u> 	ACP-1	tine No.	f Item	ACP-1 Line No. & Item Description	Hoi		
MIF/Mavy Regional Data Automation Centers/MARDAC	ion Cente	r s /MARDJ	ŭ		~ -	- 100G	Mass St	orage B	D004 - Mass Storage Backup System	item		
	   	FY 1986			FT 1989	6	   <b>-</b> -	FY 1990	0.		FY 1991	_
		Unit	Total	1	Unit	Unit   Total	- Output	Unit	Total	- Ovent	Unit	Total
Technical of Costs and Cos						<b>1</b> — —		4 — —			·	I — —
												. — .
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Magnetive Justification:  The Mass Storage System is a backend processor for large volume output. It will replace 2500 tapes, eliminate problems caused by lost tapes, and save time on file reloads.	backend pr	non		. 601 • 601	B out	ř.	4111	place 2	500 t	. •11m	inate pr	b 1 d

IF-ACP2 Page 3 of 6

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ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	ZATION PROG	BAN JUS	TIFICAL	TON SHEET	24			A. Bu	DGET SU	BUDGET SUBMISSION		
9 <b>4</b> )	(Dollars in Thousands)	spuesno	_				_	C	170661	FY 1990/1991 PRESIDENT'S	IDEMT'S	
									BIENNIAL	J		
B. Industrial Pund/Activity Group/Activity	up/Activity				<u>.</u>	C. ACP-1 Line No. & Item Description	ne No.	Item [	escript	ion		
MIF/Mavy Regional Data Automation Centers/MANDAC	ation Cente	rs/KARD	o <b>y</b>		- <b>-</b> -	D005 - DPI Equipment Transition - Phase III	PI Equip	ment Tr	ansitio	n – Phas	Ħ	
		FY 1988			FY 1989			FY 1990			FY 1991	
	-  -	Unit   Total	Total		Unit	Unit   Total		Unit   Total	Total		Unit   Total	Total
RLEMENTS OF COST	Quant	Cost	Cost	Quant	Cost	Quant   Cost   Cost   Quant   Cost   Cost   Quant   Cost   Cost   Cost	Quant	Cost	Total	Quant	Cost	Cost
	_	_			_			_				
DPIET-Phase III	_	_			_	1 6,000	_	_	7,200	_	_	6,178
_	_	_			_	_	_	_		_	_	
_	_	_			_	_	_	_		_	_	
	_	_			_	_	_	_		_	_	
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Phase III is a minimum - quarantee contract that will provide an acquisition vehicle for obtaining an additional computer | suite capability for the NAVDAC community. The purpose is to augment existing hardware suites that are being rapidly outdated by emerging technology, to minimize dependence on currently installed equipment, and to provide a wider range of mainframe capability for support of Mavy customers.

B. Industrial Fund/Activity Group/Activity  NIF/Mavy Regional Data Automation Centers/NARDAC   C. ACP-1 Line No. 4 Item Description   FY 1989   FY 1990   FY 1991   FY	Collers in Thousands)  Iroup/Activity  Commation Centers/WARDA    Quant   Cost   or     Quant   Cost	Compute	Quant rs will	FY 1989 FY 1989 FY 1989 FY 1989	C. ACP-1 L   D006 -   Mit   Total   Cost   Cost   Cost	ACP-1 Line No. & Item Des D006 - IDAFIPS Processors D005 - IDAFIPS Processors Total   Unit   T Cost   Quant   Cost   T 6,161	FY 1990 Processo FY 1990 FY 19	# FY 1990/1991 PRESIDENT'S  # Item Description  Processors  FY 1990   FY 1999    Unit   Total   Unit   Cost	Quant   Quant	FY 1991  FY 1991  Cost   Cost	Cost Cost 1,975
Mavy Reg	FY 1988 FY 1988   Unit     Unit     Unit	Total   Cost   Cost   Compute	Quant cs will	Py 198	ACP-1 L D006 - 9 9 Cost [ 6,161	IDAFIPS IDAFIPS Quant  count four Rd itial cc	Frocess Process Frocess Frocess Frocess	ors ors  Total Total   5,225   5,225	on Quant Quant Process	FY 199   Unit   Cost	Cost Cost 3,975
Mavy Reg	FY 1988  FY 1988    Unit     Unit     Unit	Total Cost Compute	Guant rs will	Py 198 Cost Cost	D006 - 9 9   1   Total     Cost	IDAFIPS    Quant   Quant	FY 199	0 0 1 Total 1 Total 1 5,225	Quant   Quant	FY 199   Unit   Cost	Total Cost 3,975 dity the
ELEMENTS  Ve Justif.  Chase and  ort the simplement  Norfolk,  ific work,	FY 1988    Unit     Unit     Unit	Cost	Quant	Py 198 Cost Cost Luide	Total Cost 6,161	four Mulitial or	FY 199	0   Total   Total   5,225   5,225	Quant   Quant	FY 199   Unit   Cost   Cost	Cost 3,975
ELEMENTS  Ve Justif.  Chase and  ort the se  implement  Norfolk,	want   Unit	Total Cost	Quant	Cost Cost De req	Cost   Co	Quant   Quant	Cost	Total   Total   Total     Total     5,225     5,225	Quant   Quant	Unit   Cost 	Cost Cost 3,975
ve Justif.	Mant Cost	Compute	quant rs vill	De red de q	Cost 6,161	Gour MU	Cost	Total   5,225   5,225     5,225	Quant Process	Cost   co	3,975
ve Justif. chase and ort the so implement Norfolk,	of UNISYS A-17	compute	rs will	be req	6,161	four M	BBACs t	5,225	process	ing cap	3,975
Marrative Justification:  Purchase and subsequent upgrade of the support the scheduled implementation workload and wARDACS Norfolk, Pensacola and San Dithe Pacific Workload.	of UNISYS A-17	comput.	rs vill	be red	uired at	four Mi	RDACS	• • • • • • • • • • • • • • • • • • •	process	ing cap	city the
Marrative Justification:  Purchase and subsequent upgrade of the scheduled implementation workload and wARDAcs Norfolk, Pensacola and San Dithe Pacific workload.	of the IDA	compute	rs will	be red	uired at	four Mi	EDACS t	ensure o	process	ing cap	city the
Marrative Justification:  Purchase and subsequent upgrade of to support the scheduled implementation initial implementation workload and warbacs Norfolk, Pensacola and San Dithe Pacific workload.	i i i i i i i i i i i i i i i i i i i	Compute	rs will	De req	uired at	four M	H BDACs t	o ensure	process	ing cap	city the
Marrative Justification:  Purchase and subsequent upgrade of to support the scheduled implementation initial implementation workload and wARDACS Norfolk, Pensacola and San Dithe Pacific workload.	of UNISYS A-17 on of the IDA	compute	rs will	be req	lired at	four Mi	LEDACS t	o ensure	process	ing cap	city the
Marrative Justification:  Purchase and subsequent upgrade of the support the scheduled implementation workload and wARDAcs Norfolk, Pensacola and San Dithe Pacific workload.	of UNISYS A-17 on of the IDA	compute	rs will tem Mavy	be req	l uired at	four Mi	RDACs t	o ensure	process	ing cap	city the
Marrative Justification:  Purchase and subsequent upgrade of the support the scheduled implementation workload and wARDACS Norfolk, Pensacola and San Dithe Pacific Workload.	of UNISYS A-17 on of the IDA	compute	rs will com Mavy	be requ	uired at	four M	RDACs t	o ensure	process	ing cap red for ch MARD	city the
JARDACS Norfolk, Pensacola and San Dishe Pacific workload.	n=16.45 >0 +++	FIPS sys	Aitions!		The in		ntigura	tions wi	40 70	cn naku	زِ
	ego will be t	hed as an he suppo	dictonal rt sites	for a	cial pro	cessing operati	centers ons; NA	Are Add RDAC Pea	ed at ea rl Harbo		TOCOSS

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ASSET CAPITALIZATION FROGRAM JUSTIFICATION SHEET	IZATION FRO	GRAM JU	STIFICAT	TON SHEE				A.	DGET SU	BUDGET SUBMISSION		
ă)	(Dollars in Thousands)	housand	•						1990/19	FY 1990/1991 PRESIDENT'S	IDENT'S	
B. Industrial Fund/Activity Group/Activity	oup/Activit	<b>&gt;</b>			ن	C. ACP-1 Line No. & Item Description	ne No.	I I I I	Descript.	ion		
MIP/Mavy Regional Data Automation Centers/WARDAC	mation Cent	• ES/KAR	<b>DA</b> C			D007 - C	D007 - Other Equipment	1ipment				
		FY 1988			FY 1969			FY 1990			FY 1991	
ELEMENTS OF COST	Ouent	Unit	Unit   Total	ouent	Unit	Unit   Total   Cost	Outnt	Unit	Unit   Total	Unit   Total   Unit   Total   Unit   Total   Unit   Total   Cost   Cos	Unit	Unit   Total
	-	_			_							
Other Equipment			111,023			417			285			1,324
	. <b>-</b>											

Procurement of other ADP equipment is needed to keep the NARDACs abreast of current technology and increase their competitive edge in the ever-changing field of ADP. The ability to be responsive to customer needs throughout the Navy is a driving force behind these procurements, which include upgrades for tape drives, terminals, and software. Also included in this category are uninterruptable power supplies and security equipment.

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	FY 1091	QUANTITY   TOTAL COST				1.5			7.	1.7		IF EXHIBIT ACP-1
	FY 1990	TOTAL COST			1.7		5.0	9.1		15.8		
MAVAL AVIATION DEPOTS DEPARTMENT OF THE NAVY NAVY INDUSTRIAL FUND ASSET CAPITALIZATION PROCEAM FY 1990/1991 PRESIDENT'S BIRNNIAL BUDGET (Dollars in Millions)	1989	TOTAL COST   QUANTITY			7					0		
HAVAL AVIATION DEPOTS DEPARTMENT OF THE NAVY NAVY INDUSTRIAL FUND ASSET CAPITALIZATION PROCRAM (0/1991 PRESIDENT'S BIRMIAL (Dollars in Millions)	I IV	QUANTITY								- 2		
FY 199	FY 1988	QUANTITY TOTAL COST	1 1.3	1 1.4						TES 7.0		
	Mari	DESCRIPTION	Hydraulic Test Stand	VAST Test Station	Auxiliary Power Unit Test Cell	Flexible Manufacturing Cell	Automatic Digital Acquisition System	Kenway Storage & Distr. SYS Update	Computer System Upgrade	TOTAL HORIGINIZATION INITIATIVES	Interactive Traphics	
	LINE	NUMBER	E010	E011	E012	E013	E014	E015	E016	TOTAL P	E017	

LINE	Wall	Ž4	1988	74	FY 1989	λ <u>4</u>	1000	ΛΔ	1001
NUMBER	DES	QUANTITY	1	QUANTITY	TOTAL COST	QUANTITY	1	QUANTITY	TOTAL COST
E018	Gear Measuring Fac Stand			<b>-</b>	1.5				
E019	Grinding Machine						8.1		
E020	Compact Automatic Antenna Test Set					, and the same and the	1.0		
E021	Digital Computer System								٠.
E022	RAMP				.7	<u></u>	6.	~	3.7
TAL	TOTAL NEW/EXPANDED TECHNIQUES	ES.	1.7	• •	2.2		3.7		4.2
E023	CADS Syctem	•	۶.	~-~-					
TOTAL C	CAD/CAM/CAR		9.		0		0		0
E024	NALCCOIS		9.1		2.2				<b>-</b> :
E025	[VN		2.5		<b>-</b> .	<b></b>	e.		e.
TOTAL HAJOR	GAJOR ADP BOUTPHENT		11.6		2.3		.3	~ = ~	0.4
	4		-				T		EXHIBIT ACP-

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			ASS PY 1990/1:	NAVAL AVIATION DEPOTS DEPARTMENT OF THE NAVY NAVY INDUSTRIAL FUND ET CAPITALIZATION PROG 991 PRESIDENT'S BIENNI (Dollars in Millions)	NAVAL AVIATION DEPOTS DEPARTMENT OF THE NAVY NAVY INDUSTRIAL FUND ASSET CAPITALIZATION PROGRAM FY 1990/1991 PRESIDENT'S BIENNIAL BUDGET (Dollars in Millions)	f BUDGET			
LINE	MILI	À	1988	À	1989	À	PY 1990	A	1001
NUMBER	DES	QUANTITY		QUANTITY	TOTAL COST	QUANTITY	TOTAL COST		TOTAL COST
E026	Other ACP Equip		27.9		19.8		12.2		27.3
OTAL !	TOTAL ALL ACP EQUIPMENT UNDER \$1H		27.9		19.8		12.2		27.3
E027	Minor Construction		7.1		5.9		10.7		10.0
TAI.	TOTAL HINOR CONSTRUCTION		7.1		5.9		10.7		10.0
E028	NIPMS		1.6		1.5		2.4	***	1.6
E029	WCS		4.7		6.2		2.4		9.
TAL 1	TOTAL HIS SYSTEM COSTING \$1M OR HORE		6.3		7.7		4.8		2.2
E030	Other Management Information System		9.		۲.				
TAL I	TOTAL MIS SYSTEM COSTING , UNDER \$1M		9,						<b></b>
	GRAND TOTAL		63.3		48.6		47.5		47.2
	T			1	, S			II	IF EXHIBIT ACP-1

Y	SE	ASSET CAPITALIZATION			PROGRAM JUSTIFICATION SHEET ars in Thousands)	I SHEET				A. BUDGET SUBMISSION	L SUBMI	NOISS
B. Industrial Fund/Activity Group/Activity	PE	Activity G	roup/Activi	2		C. ACP	1-1-	ine No. &	C. ACP-1 Line No. & Item Description	iption		
NIF/NAVAL AVIATION DEPOTS/C	VIA	TION DEPOTS	CHERRY POINT	TNT		E00	<u>—</u>	LECTRONIC	E001 ELECTRONIC PUBLISHING SYSTEM	SYSTEM		
		FY 1968	8		FY 1989			FY 1990	8		.FY 1991	_
ELEMENT OF COST OLY Unit Cost Tot	3	Unit Cost	Total Cost	770	Unit Cost	tal Cost Oty Unit Cost Total Cost Oty Unit Cost Total Cost Oty Unit Cost Total Cost	730	Unit Cost	Total Cos	Oty Uni	t Cost	Iotal Cos
	-		200	-		009				~	<del></del>	007

Three phase Project that will eliminate \$38.8 million dollars in contracting costs to develop and publish manuals, user guides, theory of operation books, schematics and technical documents. This system will provide documents upon demand in lieu of contracting out for them which will provide a service previously unavailable. Estimate Payback Period = .8 years. Estimated Rate of Return on Investment = 12.8%

ASS	ASSET CAPITALIZATION PROGRAM (Dollars in	DN PROGRAM JUSTIFICATION SHEET liars in Thousands)	SHEET		Υ	BUDGET SUBMISSION	NO
B. Industrial Fu	Industrial Fund/Activity Group/Activity NIF/NAVAL AVIATION DEPOTS/NORFOLK	ty	C. ACP-1 E002	l	em Descri RAGE & RE	Line No. & Item Description AUTOMATIC STORAGE & RETRIEVAL SYSTEM	
	FY 1988	FY 1989		FY 1990		FY 1991	
ELEMENT OF COST	Oty Unit Cost Total Cost	Cost Oty Unit Cost Total		Oty Unit Cost To	tal Cost	Cost Oty Unit Cost Total Cost Oty Unit Cost Total	tal Cost
Narrative Justification: Automated Simaterial tr	torage and Retri ansportation to gine Facility.	eval System will provide spa support production control a Estimated Payback 7.4 years.	provide sp on control	ace efficient controlled storage and production operations in the	ntrolled s perations	storage and in the	

B. Industrial Fund/Activity Group/Activity  NIF/NAVAL AVIATION DEPOTS/JACKSONVILLE  FY 1969  FY 1969  FRENENT OF COST OLY Unit Cost Total Cost OLY Unit Cost Total	C. ACP-1 Line No. & Item Description  E003 AUTOMATIC STORAGE AND RETRIEVAL SYSTEM  FY 1990  FY 1991  150  150
CCKSONVILLE	Cost Oty Unit Cost Total Cost Oty Unit Cost Total
ntal Cost Otyli	Cost Oty Unit Cost Total Cost Oty Unit Cost Total
Oty Unit Cost Jetal Cost Otyli	Cost Oty Unit Cost Total Cost Oty Unit Cost Total
Harrative Justification:	
utomatic uction Pi CON programilization	Storage and Retrieval System is an integral part of a Military roject at NAVAVNDEPOT Jacksonville. Due to a procedural change ramming the funding was changed to the NIF category (Asset Program).

ASSET CAPITALIZATION PROCESSN JUSTIFICATION SHEET (Dellars in Thousands)	STIFICATION sands)	SHEET		A. BUDGET SUBMISSION
6. Industrial Fund/Activity Group/Activity HIF/HAVAL AVIATION DEPOTS/ALAMEDA		<b>C. ACP</b> -	ACP-1 Line No. & Item Description PLATING TANKS AND MISCELLANEOUS E004 EQUIPMENT	scription 41SCELLANEOUS
986 AJ	FY 1989		FY 1990	FY 1991
ELENENT OF COST OLY UNIT COST TOTAL COST OLY UNIT COST TOTAL	Unit Cost To		ity Unit Cost Total C	Cost Oty Unit Cost Total Cost Oty Unit Cost Total Cost
		2,800		i .
Marrative Justification:				
- Reduces most of the - Reduces cadmium and - Reduces water consum - Integrates with the	cadmium plati cyanide waste ption and pla	ing and vac swater trea iting chemi	most of the cadmium plating and vacuum cadmium coating requirements cadmium and cyanide wastewater treatment requirements water consumption and plating chemical material consumption ites with the new Plating Facility, MCON P-783, with a dedicated IVD room,	requirements tion dicated IVD room,
preparation area and support equipment Improves the life expectancy of high st providing a better corrosion barrier.	support equi pectancy of h orrosion barr	lpment. nigh streng :ier.	preparation area and support equipment. Improves the life expectancy of high strength steel aircraft landing gear providing a better corrosion barrier.	nding gear by
170 Plating tank signs 166 Plating tanks	igns	2 Degre	Degressers	
. [-		. –		
140 Agitator sets		2 Polis	Polishing buffers	-
18 Pumps		Elect	riping to tanks Electrical to tanks	
102 Tank heating/cooling coils	coling coils	Vent	Ventilation ducting to tanks	ıks

ASSET CAPITALIZATION PROGRAM  (Dollars in The Coup/Activity Group/Activity NIF/NAVAL AVIATION DEPOTS/NORTH ISLAND  FY 1988  ELEMENT OF COST Qty Unit Cost Total Cost O
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Two turbo jet engine fuel control test stands are required to provide a means for testing after overhauling the T-58 Main Fuel Control (MFC) P/N 744322-1 and the T-64 MFC P/N 60005T77. The T-58 engine supports the H-46 helicopter and the T-64 engine supports the H-53 helicopter. Due to the nature of these fuel controls, a fuel The test stands shall be used to verify the performance and operating characteristics which will insure a safe, dependable and quality fuel control for fleet readiness. Estimated Payback Period = Beyond the estimated useful life of Return on Investment = 2%. control test stand which is composed of interconnected complicated parts in involved arrangement is required.

ASSET CAPITALIZATI (Do (Do Industrial Fund/Activity Gra	it capitalizat (D A/Activity Gr	ion Processi bellars in Th eup/Activity	ASSET CAPITALIZATION PROCESSIN JUSTIFICATION SHEET (Dollars in Thousands) Fund/Activity Group/Activity	1 1	.1 Line No.	A. BUD ACP-1 Line No. & Item Description	A. BUDG	BUDGET SUBMISSION	SION	
NIF/NAVAL AVI	NIF/NAVAL AVIATION DEPOTS/	CHERRY POINT	FV 1969	E006	- 1	ENGINE ASKARS SYSTEM FY 1990		FY 1991		
EPERT OF COST OF	Oty Unit Cost To	[e]	Cost Oty Unit Cost Tota		Cost Oty Unit Cost Total	st Total Cost	1 00 V U	Cost Oty Unit Cost Total	1,000	
Marrative Justification: The retained applied to Supplemental Suppleme	ation: The Engine retrieval s rework buil approximate Supply Cent	ASKARS Syst system and a ding at the ily \$2,500,0	The Engine ASKARS System will provide an automated storage, kitting, and retrieval system and an automated guided vehicle system for the engine rework building at the NAVAVNDEPOT Cherry Point. This system will cost approximately \$2,500,000 and the contracting facility will be the Navy Supply Center, Norfolk, Virginia.	e an automa ided vehicl herry Point tracting fa	ted storage e system fo . This sys	, kitting, ar r the engine tem will cost be the Navy	ר ק			
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NS NS	SSET	CAPIT	AL 12A	100 100 130	7	30 5	ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	<b>8</b>	SKEEL				<b>-</b>	A. BUDGET SUBMISSION	SIMBAIS	SION	
8. Industrial Fund/Activity Group/Activity	E	Activ	ity 6	Lond/	Activ	12			ن	ACP-1	C. ACP-1 Line No. & Item Description	A Item Des	cript	6			1
NIF/NAVAL AVIATION DEPOTS/ Cherry Point	AVIA	TION D	EPOTS	/ Che	rry P	oint				E012	E012 AUXILIARY POWER UNIT TEST CELL	POWER UNI	T TES	r CELL			
			FY 1968	2			7	FY 1989		-	FY 1990	966	-		FY 1991		
ELEMENT OF COST OLY Unit Cost Total Cost	<b> </b>	X MIE	Cost	Tota	Cos	77	Umit C	1 130	otal Co	25 057	Unit Cos	L Total Co	15t Ot.	Unit	Cost	otal Co	13
												1,721			·		<del></del>
											- <del></del>						

The Naval Aviation Depot, Cherry Point is the East coast designated overhaul point for the Department of the Navy. Current plans call for the rework and testing of all GTC-92-2, T-62T-11, and T-62T-27 pneumatics engine auxiliary power units by FY 92. Expected workload overhaul and testing of aircraft pneumatics systems, components, and accessories for the Estimated Rate of Return on for TY 89-91 is 5612 Units. The proposed equipment, four pneumatics engine test cells, contributor to increasing maintenance costs/downtime. The new units will contain the present condition of the test cells (outdated computer control system) is the primary latest computerized control for the unit under test, improving overall efficiency and will replace existing equipment which is reaching the end of its expected life. The accuracy of testing. Estimated Payback Period = 2.9 years. Investment = 5.22.

ASS	ASSET CAPITALIZATION <b>PROGRA</b> (Dollars in 1	I <b>PROGRAM JUSTIFICATION</b> SHEET ars in Thousands)	<b>EI</b>	A. BUDGET SUBMISSION	SSION
B. Industrial Fun	Industrial Fund/Activity Group/Activity NIF/NAVAL AVIATION DEPOTS/NORFOLK		C. ACP-1 Line No. & It	Line No. & Item Description FLEXIBLE MANUFACTURING CELL	
	FY 1968	FY 1989	FY 1990	FY 199	11
ELEMENT OF COST	Oty Unit Cost Total Cost	Cost Oty Unit Cost Total	Cost Oty Unit Cost Total	otal Cost Oty Unit Cost Total	<b>Total Cost</b> 1,500
Marrative Justification: This is a totall replace four CNV will reduce man machining cell of twill provide	ly intergra 2 2-axis ma 1facturing of four 3-a an annual	dware, software ranginate have been out insiderably. The synthes operated by the vings of \$380,000 to	ited hardware, software random processing manufacturing system. It withines that have been out of production for eight years. The new system considerably. The system consists of a numerically controlled wais machines operated by three machinists, eliminating one machinist cost savings of \$380,000 in labor, maintenance, and lost work hours.	turing system. It will tyears. The new system erically controlled nating one machinist power and lost work hours.	m sition.
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ASS	) 13	ASSET CAPITALIZATION	ZATION (Dell		25 ±	LEST.	N PROGRAM JUSTIFICATION SHEET lars in Thousands)	8	KCI						-: 2	A. BUDGET SUBMISSION	SSIMO	101
B. Industrial fund/Activity Group/Activity	W/P	ctivity	3	m/Act	THE SE	=			ن	ACP.	155	C. ACP-1 Line No. & Item Description AUTOMATIC DIGITAL DATA FOLL ACQUISITION SYSTEM (ADDAS)	L Item DIGIT	AL DAT	ription's	e		
MIF/MAYAL AVIALIUM DECUS) N			FV 198	MOKIN	TORIN TORING	2	2	FY 1989				FV 1990	26			FY	FY 1991	
ELENENT OF COST OLY WHIL CASE TO	3	5 119	13	otal C	150	13	211	11131	ptal (	iost	N A	11 60	to lot	1 605	7101	mit ce	150 100	tal Cost Oty Unit Cost Total Cost Oty Unit Cost Total Cost Oty Unit Cost Total Cost
													<u>,,</u>	2,000				
						4		1			_		4		1		1	

usage and establish automated documentation procedures. Some major features of the ADDAS are listed below: This concept in engine testing will not only greatly improve the turnaround time during testing of various type of engines already in NAVAVNDEPOT, North Island inventory, but will also reduce the amount of effort This proposal outlines the justification to modernize NAVAVNDEPOT, North Island's Test Cells 9 through 12. documentation of the engine run improve test cell efficiency, reduce fuel consumption, increase test cell needed for adapting future types of engines to the test cell complex. It will also greatly improve the

- Data is collected almost instantaneously, both automatically and/or on manual command. Printed and/or displayed on a CRT display.
  - Immediate data normalization including standard time correction.
- Built-in calibration routines can calibrate the system to internal references. Automatically, and/or on command, thereby verifying the systems constant calibration.

Estimated Payback Period - 8.38 years.

ASSET CAPITALIZATIO (Do) (Do)  B. Industrial Fund/Activity Grou	ASSET CAPITALIZATIO (Do)   Fund/Activity Grou		on Processor Justification SHEET llars in Thousands) up/Activity C.	SHEET C. ACP.	C. ACP-1 Line No. & Item Description KENNAY STORAGE AND	Item Descr	A. BUDGET SUBMISSION ription	SS ION
NIF/WAVAL A	NIF/MAVAL AVIATION DEPOTS/	/ NORTH ISLAND	AND FY 1989		E 015 DISTRIBUTION SYSTEM UPDATE FY 1990	N SYSTEM UP	DATE FY 1991	
ELEMENT OF COST OLY Unit Cost Total Cost Total Cost Oty Unit Cost Total Cost Total Cost Total Cost  1 9,100	Oty Unit Cost	Total Cost	Oty Unit Cost	lotal Cost	ty Unit Cost	<b>Total Cost</b> 9,100	Oty Unit Cost	Total Cost

Aircraft Component Rework Facility. This system will replace the current AS/RS and conveyor equipment presently in Building 472. This new integrated material handling system shall include the following equipment elements: The Kenway Storage and Distribution System provides automatic storage and retrieval of parts and material for the

- Automated storage and retrieval systems and rack
- Material handling totes including bar code labels
- Integrated Material Handling System Computer and (Programmable) Controller Network
  - Power distribution to all system components
- Large Item and Very Large Item pallet racking
  - Material Movement Vehicles
    - Material Movement Carts
- Material Control Centers and related area equipment
- Structural steel supports, maintenance platforms, and equipment guards
- Interface to Zenith terminals through Ungermann-Base LAN. REFERENCES
  - All RF related equipment

1F-ACP2

ASSE	ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	M JUSTIFICATION S Thousands)	SHEET		<u> </u>	BUDGET SUBMISSION	ISSION
B. Industrial Fun	Industrial Fund/Activity Group/Activity	ty	C. ACP.	C. ACP-1 Line No. & Item Description	Descri	otion	
NIF/NAVAL AVI	NIF/NAVAL AVIATION DEPOTS/NORFOLK		E016	COMPUTER SYSTEM UPGRADE	UPCRADE		
	FY 1988	FY 1989		FY 1990		FY 1991	161
ELEMENT OF COST O	Oty Unit Cost Total Cost Oty Unit Cost Total	Oty Unit Cost Ig	1 1	Cost Oty Unit Cost Total		Cost Oty Unit Cost Tota	Total Cost
Marrative Justification:	ation:						
	Upgrade for Materials Laboratory Information Management System. This will enable central data collection of the instrumentation used for spectronic, chromographic, and oil analysis measurement for statistical and trend analysis. Upgrade will consist of the following additional lab equipment which will interface with the Materials Laboratory Information Management System: spectro meters, x-ray equipment, chromatographo, and scanning electron microscopes.	erials Laboratory Information llection of the instrumentatio s measurement for statistical g additional lab equipment whi rmation Management System: sp scanning electron microscopes.	ntation Manag ntation use ical and t nt which wi n: spectro	on Management System. This will enable tion used for spectronic, chromographic, al and trend analysis. Upgrade will conwhich will interface with the Materials spectro meters, x-ray equipment, chromess.	This will enable ic, chromographic Upgrade will coith the Materials equipment, chrom	enable graphic, fill consist erials chrom-	

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YS	SSET	ASSET CAPITALIZATION		(Dellars in Thousands)		PROCESSI JUSTIFICATION SHEET ars in Thousands)	<b>8</b> 01	SHEET				A.	A. BUDGET SUBMISSION	MISSIO	-
B. Industrial fund/Activity Group/Activity	3	/Activity	25	Activit				C. AC	1-4	Line No. 1	C. ACP-1 Line No. & Item Description	ript	50		
NIF/NAVAL AVIATION DEPOTS/ E	NIV.	TION DEPO	TS/ PE	ENSACOLA				EO	18 G	EAR MEASU	E018 GEAR MEASURING FACILITY STAND	ITY S	TAND		
	<u></u>	FY	FY 1988			2	FY 1989			FY 1990	<b>26</b>		F	FY 1991	
ELEMENT OF COST OLY Unit Cost Total Cost Oly Unit Cost Total Cost Oly Unit Cost Total Cost Total Cost	1	r Umit Co	st lota	1 Cost	12	Unit Ca	133	otal Cost	730	Unit Cos	Total Co.	100	Unit Co	est Tota	1 Cost
					-			1,500						<del></del> ,	
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an important issue. Pailure of any gearbox component while in flight could be disasterous. The measurement show increased production requirements for all aircraft dynamic components. Aircraft and aircrew safety is tracted out. Clearly this method is not suitable to the Depot. It is estimated that 25 percent of these This strategic procurement is to establish a new capability for the precision measurement of gears and or nature. Pirst article gear components are presently either measured by the source vendor or are subconsplines. The Depot does not have the capability to perform accurate inspection of components of this equates to \$294,500 for an 18 month period at current production rates. Production planning forecasts gearbox failures could be eliminated by on site inspection of the gear sets prior to reassembly. system will enable the Depot to access potential failures not otherwise identifiable.

ELEMENT OF COST Oty Unit Cost Total Cost Tot	ASSET CAPITALIZATION PROGRAM.  (Dollars in The B. Industrial Fund/Activity Group/Activity  NIF/NAVAL AVIATION DEPOTS/ALAMEDA	AS ial F	ASSET CAPITALIZATION PRO (Dollars Industrial Fund/Activity Group/Act NIF/NAVAL AVIATION DEPOTS/ALAMEDA	ITALIZI ivity ( DEPOTS	ATION F (Dollar Group//	ION PROGRAM JUSTIFICATION SHEET DIBars in Thousands) Dup/Activity C. LAMEDA	1 JUST	IFICA inds)	1108	SHEET C.	ACP -   E019	I Line	C. ACP-1 Line No. & Item Description E019 GRINDING MACHINE	CHINE	A. Descri		SUBMI	SSION
ELEMENT OF COST OLY Unit Cost Total Cost OLY Unit Cost Total Cost OLY Unit Cost Total Cost Total Cost Total Cost Total Cost Total Cost Total Cost OLY Unit Cost O				FY 15	BB BB			<u> </u>	1989				<b>₹</b>	060		•	T 199	_
1,800	ELEMENT OF	COST	Oty Un	it Cost	Tota	Cost	1/10	nit C	ost I	otal (	ost 0	ty Un	it Cos	Total	Cost	Oty Unit	Cost	Total Co
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The new grinder will provide the new capability of grinding P-3 and A-6 landing gear cylinders. Planned workload, using present equipment, indicates a deficit of 4,254 machine hours per year. Contracting out the deficit hours would cost approximately \$455,000 per year. Since the established service life of the proposed grinder is 13 years economics suggest the purchase is justified. Estimate Payback Period = 4.8 years. Estimated Rate of Return on Investment = 17%.

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	AS	SET	ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Bollars in Thousands)	(De)	Tars	N PROGRAM JUSTIFICA lars in Thousands)	JUST	IFICA nds)	110M	SHEE							A. BUDGET SUBMISSION	BMISS I	3
B. Industrial Fund/Activity Group/Activity NIF/NAVAL AVIATION DEPOTS/ALAMEDA	ial F	umd/ IATI	Activity ON DEPO	Groot	IP/ACT	ivit				ن	ACP E02	-1 Li	C. ACP-1 Line No. & Item Description E020 COMPACT AUTOMATIC ANTENNA TE	& Ite	m Desci	iptio	ACP-1 Line No. & Item Description E020 COMPACT AUTOMATIC ANTENNA TEST SET (CAATS)	(CAA	rs)
			FY	FY 1988				7	FY 1989				FY	FY 1990			Ŧ	FY 1991	
ELEMENT OF COST OLY Unit Cost Total Cost Oty Unit Cost Total Cost Oty Unit Cost Total Cost Total Cost Total Cost	150	6	Unit Co	131	tal	ost	377	nit	ost	otal	Cost	Oty 10	nit Co	t Tot	al Cos	1 0tv	Unit Co	st Tot	al Cos
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microwave antenna test system capable of testing the latest microwave antenna and radomes. The expansion will The Compact Automatic Antenna Test Set (CAATS) expansion is an automatic instrument/software package used to expand the CAATS at NAVAVNDEPOT Alameda. The CAATS expansion will update the station to a state-of-the-art automation. However, the volume of workload expected for the future will require at least one additional shift. Without the CAATS expansion, NAVAVNDEPOT Alameda will be unable to accept the additional workload. increase frequency capability to 100 GHZ. It will greatly increase both stability and accuracy of test results. The purpose of expanding the CAATS is to maintain and increase the antenna workload through the enhancement of the CAATS station. The expanded CAATS system will increase the speed of testing through Estimated Payback Period = 2.9 years. Estimated Rate of Return on Investment = 25%.

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	FION PROCESSES Dollars in Th	JUSTIFICATION S IOUS ands)	жет			A. BUDGET SUBMISSION	Hens 13	SION	
B. Industrial Fund/Activity Gro	roup/Activity		C. ACP	C. ACP-1 Line No. & Item Description	A Item Descr	ription			
NIF/NAVAL AVIATION DEPOTS/	/ NORTH ISLAND	a	E021	ł	DIGITAL COMPUTER SYSTEM	rem			+
8961 AJ	<b>\$</b>	FY 1989		FY 1990	066		FY: 1991		
SI SMENT OF COST INVIINIT COSTITU	3	Cost Otvillait Cost Total	ital Cost	Cost Otviunit Cost Total	t Total Cos	Cost Oty Unit Cost Total	it Cost	Total Cost	-
						-		500	
Narrative Justification:									
of is object provice provice provice provice provice is is is is assisted if the procestral is is by the procestral is is subset in the procestral is is is in the procestral is is in the procestral in the procestral is in the procest procestral in the procestral is in the procestral in t	pment is required to project project wisely. Currently, a provide dynamic responses procurement actions at a le ons from government personne sonnel. Detailed costing an rials is not finite enough to assist in the decision piled phase of operation quic System to be used to automa of processes and material. Central Processor  12MB/64K Chip ECC HOS Memory Operating System License Disk Subsystem Tape Subsystem	required to project workload related to the Mobile Vans and track and buy components wisely. Currently, computational resources do not have the capability to process le dynamic responses to struational projections. This restricts intelligent and ent actions at a least cost method. The financial tracking of outstanding government personnel is manually tracked and needs to be automated to extract monies Detailed costing and tracking of financial amounts related to the production process not finite enough to make sound economic decisions. The accounting system will be it in the decision processes by being able to provide financial impact statements on se of operation quickly and reliably. Estimated Payback Period = 5.8 years. Digital obe used to automate manual procedures and actions related to accounting and material system console  Chip ECC NOS Memory g. System Console System License h. Required Peripheral Hardware	related fonal pro method. ally trac g of fina und econo by being eliably. procedur Computer f. Commu g. Syste h. Requi	workload related to the Mobile Vans and computational resources do not have the to situational projections. This restricts is nanually tracked and needs to be autided tracking of financial amounts related to make sound economic decisions. The accrocesses by being able to provide financially and reliably. Estimated Payback Perite manual procedures and actions related Digital Computer System consisting of:  f. Communications  g. System Console  h. Required Peripheral Hardware	e Vans and (the variation) tracking of stoke autores. The according financial ayback Perions related in sting of:	track and capabilits ts intell of outsta ounting a al impact od = 5.8	th buy con ty to provident and anding beatraction oduction system w t statem years.	components and and act monies on process will be ements on Digital and material	

ASSET CAPITALIZATION PROCEDUM  (Dollars in The string of t	SE A PARTIE SE	ASSET CAPITALIZATION DEPOTS/CAVIATION DE	Total Cost   Other   Cost   Total Cost   Other   Cost   Cost	Thous the state of	sands) FY FV FV Unit Co	CAT 108 5	C. ACI E03 E04 250	ACP-1 Line E022 RAMP I QUY Un	C. ACP-1 Line No. & Item Description  BO22 RAMP  FY 1990  TSO 1 000 1 000 1 000 1	No. & Item De FY 1990 Cost Total C	Pescrip Cost	euD tion ty Un	BUDGET SUBMISSION It ion FY 1991 Ity Unit Cost Total	15510M 91 1.658
				1		· · · · ·		•		<b>〈</b>	,	•		

hard to obtain spare parts at reduced unit costs, and improve readiness through increased availability of spare can produce parts on demand from prepositioned raw materials and digital parts data. Through FY 1991 the Navy The estimated Return RAMP (Rapid Acquisition of Manufactured Equipment) is a self-contained and fully automated machine shop which Center, Indianapolis and Charleston Naval Shipyard. The cells at the NADEP and Shipyard will be configured to associated software. The RAMP cell at Cherry Point which will be fully operational in FY 1991.
RAMP technology provides the flexibility to efficiently produce small Lot sizes (as small as one) over a wide concepts, standardized digital drawings and specifications, Computer Aided Process Planning, Group Technology on Investment (ROI) is approximately 142% (5 years) and 115% (lifetime) with a payback of less than one year produce Small Mechanical Parts (SMP) while the cell at the Avionics Center will be configured to manufacture expected that RAMP will decrease procurement and administrative leadtimes (up to 90%), establish sources for Spare part inventory levels and carrying costs are also expected to be significantly reduced through Through the use of Computer Integrated Manufacturing plans to procure a total of three RAMP cells which will be installed at NADEP Cherry Point, Naval Avionics schemas and telecommunications, RAMP will provide improved quality and repeatability. In addition it is Printed Wiring Assemblies (PWA). Funds requested will provide for the establishment of oneSMP cell and The estimated Internal Rate of Return (IRR) for RAMP investment is estimated to be 122%. use of Just-In-Time philosophy for Customer ordering of RAMP produced parts. range of parts (initially up to 3,000 per work cell). parts.

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WS5	SET	ASSET CAPITALIZATIO	ATION PROGRAM JUSTIFICATION SHEET (Bollars in Thousands)	housan	IFICATION Ids.)	N SHEET				Se ∣	A. BUDGET SUBMISSION	MISSION	
B. Industrial Fund/Activity Group/Activity	pun/	Activity 61	.oup/Activit	3		C. AC	ACP-1 Line No	ne No. &	C. ACP-1 Line No. & Item Description	ription	_		
NIF/NAVAL AVIATION DEPOTS	IAT	ION DEPOTS					Z4 NAL	21000					
		FY 1988	82		FY 1989	88		FY 1990	90		FY 1991	166	
ELEMENT OF COST Otylunit Cost Total Cost Otylunit Cost Total Cost Otylunit Cost Total Cost Otylunit Cost Total Cost	13	Unit Cost	Total Cost	M X 10	nit Cost	Total Cost	01×10	Init Cost	Total Co	st Oty	Unit Cos	t Total (	Cost
ALAMEDA			2,000	_									
CHERRY POINT			(			700	_						
JACKSONVILLE			2,107			877							
NORTH ISLAND			3,342			800						66	•
PENSACOLA			470			2 169						18	1.5
TOTAL	_		(1116										

of the Naval Aviation Depots to work as a corporate unit and interface with higher level computer systems. The The Naval Aviation Logistics Center Communication and Office Information System was developed and maintained by Aviation Depots to operate compatible equipment and use shared resources. This will enhance the capabilities The third phase of the ongoing project is to provide office information systems. This phase will the Naval Aviation Depot Operations Center. This is a corporate initiative. This system allows the Naval spreadsheets, telecommunications, and locally developed software. The office automation will increase the expedite a competitive procurement for the hardware, software and services for the Naval Aviation Logistic provide the funding for the host computer, additional workstation and networking capabilities between the various buildings and offices of the Depot. The systems Decision II was approved by CNO on 13 July 87 to effectiveness and productivity of managerial, professional, and clerical workers who are faced with the increasing demand for technical research, investigative studies, ongoing information programs, routine system supports local data base management, word processing, graphics, electronic mail, data entry, Center Communication and Office Information System (NALCCOIS) for a six-year period. paperwork.

<b>V</b>	SET	ASSET CAPITALIZATI (Do	ATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	Thous	TIFICATION ands)	N SHEET			<b>V</b>	A. BUDGET SUBMISSION	IBM I SS 10N	
B. Industrial Fund/Activity Group/Activity NIF/NAVAL AVIATION DEPOTS	und/ IATI	Activity G	roup/Activil	<u>بر</u>		C. ACI	-1 Li 5 Loc	ne No. &	C. ACP-1 Line No. & Item Description E025 LOCAL AREA NETWORK (LAN)	iption N)		
		FY 1988	88		FY 1989	68		FY 1990	06	FY	FY 1991	
ELEMENT OF COST OLY Unit Cost Total Cost Oty Unit Cost Total Cost Oty Unit Cost Total Cost Total Cost	73	Unit Cost	Total Cost	730	Unit Cost	Total Cost	Otylo	nit Cost	Total Cost	Oty Unit Co	st Total	Cost
JACKSONVILLE NORPOLK			472			7.5			<del>-</del>		·	
NORTH ISLAND			•						185		<u>~</u>	300
PENSACOLA TOTAL			2,472			75			287		Iñ	300

temperature, pressure, strain and other measurable phenonemon can be done more reliably at a central point with The equipment and software is required to support the NADEPs production requirements for Office, IRM, Decision Support, Manufacturing, Industrial and Engineering information flow. It also allows for central management of fewer personnel. Energy Management could be an outgrowth of the network whereby, the LAN acts as the central nervous system for the plant monitoring peak loads and area usage. The LAN could provide remote control of facilities and thus allow the shut down of entire buildings not in use. plant data communications resource planning. Industrial processes requiring monitoring of variables such as

<b>3</b>	SSET	ASSET CAPITALIZAT (D	ATION PROCEDM JUSTIFICATION SHEET (Dollars in Thousands)		STIFICATION sands)	N SHEET			<	A. BUDGET SUBMISSION	SUBMI	SSTON
B. Industrial Fund/Activity Group/Activity NIF/NAVAL AVIATION DEPOTS	Fund,	Activity G	roup/Activil	2		C. ACP	1 1-1 5 orn	ine No. 8	C. ACP-1 Line No. & Item Description BO26 OTHER ACP EQUIPMENT UNDER \$1M	iption DER \$1M		
		FV 198	2		FY 1989			FY 1990	04	- 1	FY 1991	
ELEMENT OF COST OLY UNIT Cost	8	Unit Cost	Total Cost	017	Unit Cost	Total Cost Oty Unit Cost Total Cost Uty Unit Cost Total Cost Oty Unit Cost Total Cost	01.7	Unit Cost	Total Cost	Oty Unit	Cost	Total Cost
VARIOUS			27,900			19,750			12,200		-	27,300
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								-				

professional services on aircraft and logistics problems; and numerous other duties as assigned. Therefore ACP airframe and the flight testing; and linear ball screw actuator test stand to replace the existing one that has waste disposal purification system which eliminates the environmental hazards of contaminants disposal; a gearbox fuel load test stand that provides a test procedure for overhauled gear boxes prior to installation in the high maintenance obsolete ones, effecting savings in maintenance manhours, maintenance costs, and operational milling machine to produce complex aircraft parts; multi-function hydraulic test stands that replace several upgrading of office automation and telecommunication systems. All of the above not only maintain the Depots manhours; fuel control test stands to permit testing after overhaul of engine fuel controls; a plating shop exceeded its service life by over 125%, is grossly inadequate, and consumes a unacceptably high number of Such project for FY 1990 and FY 1991 include procurement of a 5-axis The NADEPs perform a variety of complex rework operations on aircraft, weapons systems, accessories and manufacture parts and assemblies; provide engineering services; furnish technical and other maintenance manhours. In addition, purchases are planned for upgrading of automatic warehouse systems; excellent level of service but the result in both short and long term savings. purchases are varied and assorted.

AS	SET C	ASSET CAPITALIZATI	ATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	Thous	STIFICAT	ION SHE	11					BUDGET SUBMISSION	MISSION	
B. Industrial Fund/Activity Grd NIF/NAVAL AVIATION DEPOTS	und/Ac IATION	ctivity 6	iroup/Activity	ţ			C. ACP E027	MIN	ACP-1 Line No. & Item D E027 MINOR CONSTRUCTION	C. ACP-1 Line No. & Item Description E027 MINOR CONSTRUCTION	cripti	uo		1
		FY 1988	88		FY	FY 1989			FY 1990	960	-	FY 1991	166	1
ELEMENT OF COST OLY Unit Cost	01710	mit Cost		017	Unit Cos	stilota	1 Cost	OLVIU	Init Cost	Total Co	ist Oty	Unit Cos	otal Cost Otylunit Cost Total Cost Otylunit Cost Total Cost Otylunit Cost Total Cost	st
Jacksonville	_		1,073				712			1.32	_		1 7.60	_
Cherry Point		_	1,527				1.009			1,40			1 435	
Pensacola	_		1,462				712			1,50			1,302	
North Island	_		364				365			2,50	-		2, 100	
Norfolk	_		715	_			187			1.80	_		1,800	
Alameda			1,905			<u> </u>	961			2,207	اران ا		1,900	
			0000			,	7,740			c/*nr			766.6	
								1						T

Examples Minor Construction projects at the six Naval Aviation Depots cover a wide range of facilities work. of projects accomplished/planned for fiscal years 88, 89, 90, 91 are:

- Construction of a material storage mezzanine
   Construction of a covered material receiving area
- Building alterations to permit equipment installation Upgrading basic utilities systems to support production workload.

8. Industrial Fund/Activity Group/Activity NIF/NAVAL AVIATION DEPOTS	A L. C.						•
	y broup/Activit	ħ	C. ACP E02	ACP-1 Line No. 8 Item Description E028 NAVAIR INDUSTRIAL FINANCIAL MANAGEMENT SYSTEM (NIFMS)	Item Descri STRIAL FINAN SYSTEM (NIFN	iption NCIAL (S)	
FY	FY 1988	FY 1989		FY 1990	06	FY 1991	161
ELEMENT OF COST OLY Unit Cost		otal Cost Oty Unit Cost Total Cost Oty Unit Cost Total Cost Oty Unit Cost Total Cost	otal Cost	Oty Unit Cost	Total Cost	Oty Unit Cost	Total Cost
Labor	009		481		765		521
Travel	360		336		525		355
Contracts	603		728		1,127		758
CPU Time	2		2		3		7
TOTAL	1,565		1,547		2,420		1,636

Centers. NIFMS will capture labor, material, contractual and other costs at the shop and job order level; will the Customer Order records, Customers vill be billed, all cash receipts and expenditures will be generated for encompasses the principles and procedures related to budgeting, accounting, and reporting at field activities. NIFMS provides a standard financial management system for the six Naval Aviation Depots (NAVAVNDEPOTs) which accumulate and maintain them in cost and expense records; and will record financial and other information on management systems such as the NAVAIR Industrial Material Management System and the Workload Control System; Fund management functions. The system interface with local NAVAVNDEPOT systems as well as the Navy Finance NIFMS maintains general ledgers, handles disbursements, bills customers, and supports other Navy Industrial tracking costs at various levels and useful information on direct and indirect programs will be provided. These activities will occur at the six NAVAVNDEPOTs. NIFMS is designed to interface with other internal the database will also be accessible from the NAVAVNDEPOTOPSCEN for reporting purposes.

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<b>A</b> S:	SET C	APITAL 12A	ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	Thous	TIFICATIO ands)	M SHEET			<	A. BUDGE	BUDGET SUBMISSION	NOISSI	
B. Industrial Fund/Activity Group/Activity NIF/NAVAL AVIATION DEPOTS	und/A	ctivity 6	roup/Activi	7		C. ACI	04 6	ine No. & RKLOAD CON	C. ACP-1 Line No. & Item Description E029 WORKLOAD CONTROL SYSTEM	ipt ion			<del>                                     </del>
		FY 1986	88		FY 1989	68		FY 1990	0		FY 1991	16	
ELEMENT OF COST OLY Unit Cost	0tv	Unit Cost		01×	Unit Cost	Total Cost Oty Unit Cost Total Cost Oty Unit Cost Total Cost Oty Unit Cost Total Cost	0ty	Unit Cost	Total Cost	Oty Un	it Cost	Total Cos	12
Labor			1,200			1,950			1,554			787	
Travel   Contracts			204			105 3,199			30 550			50	
CPU Time Total			1,100 4,736			898 6,152			$\frac{298}{2,432}$			260	<b></b>
													+

NAVAVNDEPOTS. It schedules, inducts, and controls depot level workload consisting of aircraft, missiles, engines and component rework, and part manufacture. The system accumulates costs, distributes labor, generates payroll data, and reports work accomplishment, status and costs internally and externally. The WCS project consists of design, development and implementation of a on-line data base oriented Production Control and Management Information System to replace the current batch sequential system operating at the NAVAVNDEPOTS. The Workload Control System (WCS) is a production management and control system that is utilized by the six

ASS	ASSET CAPITALIZATI	ATION PROGRAM JUSTIFIC (Dollars in Thousands)	ION PROGRAM JUSTIFICATION SHEET	SHEET		Ÿ	BUDGET SUBMISSION	SSION
B. Industrial Fund/Activity Group/Activity NIF/NAVAL AVIATION DEPOTS	and/Activity (ATION DEPOTS	Group/Activi	ty	C. ACP	ACP-1 Line No. & Item Description E030 OTHER MANAGEMENT INFORMATION SYSTEMS (LESS THAN \$1M)	Item Descri	ption ATION	
	FY 1988	<b>88</b>	FY 1989	68	FY 1990	06	FY 1991	16
ELENENT OF COST OLY Unit Cost lotal Cost Oly Unit Cost Total Cost Oly Unit Cost Oly Unit Cost Total Cost	Oty Unit Cos	l Total Cost	Oty Unit Cost	Total Cost	Oty Unit Cost	Total Cost	Oty Unit Cost	Total Cost
Travel - LAN Contracts - LAN Labor - NALCCOIS		25 245 42		17 166 90				
Travel - NALCCOIS Contracts - NALCCOIS Total	018	45 100 595		97 215 679				

The NALCCOIS and LAN projects are developed and maintained by the NAVAVNDEPOTOPSCEN. These corporate initiatives allow the NAVAVNDEPOTS to operate compatible equipment and to use shared resources. This will enhance the capabilities of the NAVAVNDEPOTS to work as a corporate unit and to interface with higher level computer systems. The LAN (Local Area Network) is a network communication system while NALCCOIS (Naval Aviation Logistic Center Communications and Office Information System) is an inter- and intra-office communication system. MAYAL CIVIL MEGIMERING LABORATORY
DEPARTMENT OF THE MAY
MAY INDUSTRIAL FUND
INDUSTRIAL FUND ASSET CAPITALIZATION PROCRAM
FY 1990/FY 1991 PRESIDENT'S BIRMITAL HUDGEY
(Pollers in Hillions)

_	-	A.d	FY 1988	FY 1	FY 1989	FY	FY 1990	FY	FY 1991	
Line	Item	_	Total	_	Total		Total	_	Total	-
Number	Description	Quant	_ Cost	Quant   Cost	Cost	Quant   Cost	Cost	Quant	Cost	
1001	New or Expanded Techniques	1.8	1.5	•	9.	~	~	-	•	
- F002	Major ADP Systems		·	-4			e: 	- 	e: 	
<b>F</b> 063	other Equipment Under \$1M	- <b>1</b> -	1.5	5	1.2	16	e.	£1 .	·.	
¥004	Minor Construction Projects	<b>*</b>		9	٠.		• 		٠.	
	Total Program	·	·	57	5.6	92	2.0	- 25	2.1	
							· <b></b> -			
. <b>_</b> .		. <b>–</b> .				_			_	-
		_ <b>_</b>								<b>-</b> -
	~	_ ~								
									- <del>-</del>	
					_					-
						_				
								IF EXHIBIT ACP-1	TT ACP-1	
			, –	T.				Page 1 of 1	of 1	

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ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	ALIZATION PROGRAM JUST (Dollars in Thousands)	GRAM JUS	STIFICAT	TON SHEE	H				BUDGET SUBMISSION FY 1990/1991 PRESIDENT'S	BMISSION 991 PRES	I IDENT'S	
B. Industrial Pund/Activity Group/Activity	oup/Activit	>			ن -	ACP-1 E	ACP-1 Line No. 4 Item Description	I I tom	BIENNIAL Descripti	ton		
MIF/Mavel Civil Engineering Laboratory/NCEL	Laboratory	MCEL				F001 -	F001 - New or Expanded Techniques	pepuedx	Techniq	•		
		FY 1988			FY 1989			FY 1990			FY 1991	
		Unit	Unit   Total		1	1 —		Unit	Total		Unit	Total
realization of coord	Quent	084	00 Et	Quant	08	0 <b>8</b> ¢	Quent	08t _	Total	Quent	ال ا	Cost
End Items	- 18		11,496	<b>6</b> 0		633	~		219	<b>.</b> _		427
					_				_			_
		. <u>-</u>				_						
	_	_	_	_	_	_	_	_	_			
Marrative Justification:  NCEL has requirements to purchase state-of-the-art equipment to enhance the existing capability in the research arena. NCEL now leases this equipment at significant cost to sponsors. Equipment leasing is not cost effective in many cases or in the best interest of the Navy due to availability or equipment location requirements.	rchase stat uipment at f the Mavy	e-of-the signific	-ert equ	uipment t to spoi lity or '	to enhal nsors.	nce the Equipme	existing nt leasi ion requ	capabii ng is n	lity in out cost	the rese	• for the	ž.
Equipment List Includes:												
FY 1989: Navigation system, high power load bank, underwater equipment support module, humidity test chamber, acoustic and trackpoint systems and robotic test bed.	gh power lo d robotic t	ad bank, est bed.	underw	ater equ	ipment	support	module,	humidíty	/ test of	hamber,	acousti	pue :
FY 1990: Remotely operated vehicle, ram tensioner system, offroad vehicle dynamics simulator system and atomic spectrophomomer.	icle, ram b	onsione:	: system	, offrom	d vehic.	1. dynam	ics si <b>m</b> u	lator s	/stem and	d atomic		
FY 1991: Universal construction anchor, portable generator and light trailer utility vehicle and intrustion detection system.	n anchor, p	ortable	generati	or and l	ight tr	ailer ut	ility ve	hicle a	nd intru	stion de	tection	

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	TION PRO	GRAM JUS	STIFICAL	ION SHEE	į.			A. B	BUDGET SUBMISSION	MISSION	_	
(Doll	(Dollars in Thousands)	housands	2						PY 1990/1991 PRESIDENT'S	91 PRES	IDENT"S	_
									BIENWIAL			
B. Industrial Fund/Activity Group/Activity	/Activit	¥			<u>ა</u>	C. ACP-1 Line No. E Item Description	ine No.	E Item !	Descripto	201		
MIF/Maval Civil Engineering Laboratory/NCEL	boratory	NCEL				F002 -	F002 - Major ADP Systems	P System	2			
		FY 1988			FY 1989	9		FY 1990			FY 1991	
	_	Unit	Unit   Total	_	Unit	Unit   Total		Unit	Unit   Total	]_	Unit	Unit   Total
ELEMENTS OF COST	Quant	Cost	Quant   Cost   Cost	Quant	Cost	Quant   Cost   Cost	Quant	Cost	Quant   Cost   Total   Quant   Cost   Cost	Quent	Cost	Cost
End Items			304			908	-		900			930
			<b>;</b>		- <b>-</b>	<u> </u>	•		2			9
	_	_		_	_	_	_	_		_	_	_
	_			_	_	_	_	_			_	_
	_	_	_	_	_	_	_	_			_	_
	_	_		_	_	_	_	_			_	_

NCEL plans to implement a professional management system by PY 1990. This system will provide comprehensive information of on the status of each research initiative and the technical progress of each engineer or scientist associated with a specific project.

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	ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	GRAM JU housend	STIFICAT: s)	ION SHEE	F			- A. E.	A. BUDGET SUBMISSION FY 1990/1991 PRESIDENT"S	BMISSION 991 PRES	IDENT"S	
									BIRMMIAL	L		
B. Industrial Fund/Activity Group/Activity	iroup/Activit	Å			ن 	C. ACP-1 Line No. & Item Description	ine No.	& Itom !	Oescript.	ion		
MIF/Naval Civil Engineering Laboratory/NCEL	19 Laboratory	MCEL				F003 - (	other Eq	uipment	F003 - Other Equipment Under \$1M	HI.		
		FY 1988	8		FY 1989	6		FY 1990	6		FY 1991	
ELEMENTS OF COST	- Outpt	Unit	Unit   Total	Quant	Unit	Unit   Total   Unit   Total   Unit   Total   Unit   Total   Ount   Total   Ount   Cost   Co	on a	Unit	Unit   Total	Output	Unit   Total	Total Cost
		_	_		_			_	_			
End Items			11,504	42		11,217	16		851	13		629
			- <del>-</del>									
	-	_	_	_		_	_	_	_	_	_	_
	_	_	_	_	_	_	_	_	_	_	_	
	-	_	_	_	_	_	_	_	_	_	_	_
	_	_	_		_	_	_	_	_	_	_	_

The NCEL capital equipment inventory, which includes both purchased and contributed fixed assets, must be continually replaced or upgraded to current requirements and standards. The equipment upgrade requirement includes computer equipment, | scientific equipment, photo equipment, shop equipment, and other types of engineering equipment.

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	LIZATION PROGRAM JUST	GRAM JUS	TIFICAT	ION SHEE	H.			- Y	UDGET SU	BUDGET SUBMISSION		
****									BIENNIAL BIENNIAL	FI 1990/1991 FRESLUBAT"S BIENNIAL	LUGAT	
B. Industrial Fund/Activity Group/Activity	/Activit	Ā			; 	ACP-1 1	ACP-1 Line No. & Item Description	f Item	Descript	ion		
NIF/Maval Civil Engineering Laboratory/NCEL	boratory	MCEL				F004	F004 - Minor Construction Projects	nstruct	ion Proj	•cts		
		FY 1988			FY 1989			FY 1990			FY 1991	
		Unit	Unit   Total	_ :	Unit	Unit   Total		Unit	J	·	Unit	Unit   Total
End Items	onene e	7697	736	onenc on	100	45.0	Quant		Total	Quent	Cost	Cost
	· 								<u></u>			}
							- <b>-</b> -			<b>-</b>		
Marrative Justification:   Some of these construction projects include:   Some of these construction projects include:   FY 1989: Alterations to library, concrete pad 120'x100', office space 20'x16' BLDG 1311, line tension facility 10'x100', structural test laboratory, harardous waste holding area, rigger facility 40'x100', alterations to cold chamber     BLDG 566, upgrade electrical service to BLDGS 1195 and 570.   FY 1990: Alterations to steam laboratory BLDG 562, noise suppression around air conditioning units BLDG 560, construct restrooms BLDG 599 and BLDG 560, secure workspace 35'x35" BLDG on 60'x80' pad, office space BLDG 570.   FY 1991: Soil test facility 20'x48', repair and alterations to fiber optics laboratory BLDG 558, anitfouling work facility 20'x20' BLDG 1307, relocate hydraulic laboratory, install area and patking lighting, storage shed BLDG 569, concrete mix shed BLDG 558, alterations to: boiler system BLDG 562, DOL Pit BLDG 595, wind tunnel BLDG 564, corrosion pier BLDG F22.	jects in concrete ry, haza ical ser ical ser oratory 599 and 8', rapa ate hydrs 58, alte 58, alte	clude: pad 120 rdous wa vice to bling 565 BLDG 567 i BLDG 567 ir and a aulic la	)'x100', iste hol BLDGS 1 BLDGS 1, noise ', noise '), secu	office ding are 195 and suppress re works re y, insta	space 20 is, riggs 570. Sion arc sion arc pace 35: pace 35: pace 35: pace 55: pace 5	orfacil br facil vund air vas Bi ics lab and par	ity 40'x ity 40'x conditi .DG on 60 oratory king lig	, line 100', a oning u 'x80' p 'x80' p hting,	tension lteration nits BLD ad, offi ad, offi storage , wind t	facility ns to co G 560, ce space culing w shed Bib	10'x100 1d cham 1d cha 1d cham 1d cham 1d cham 1d cham 1d cham 1d cham 1d cham 1d cham	9., 0 tility
				75							II Page	IF-ACP2 Page 4 of 4

EAVY IMDUSTRIAL FUND
ASSET CAPITALIZATION PROGRAM
FY 1990/1991 PRRSIDENT'S BIRNETAL BUDGET
(Dollars in Millions) HAVY PUBLICATION AND PRINTING SERVICE DEPARTMENT OF THE MAY

		FY	FY 1988	FY	FY 1989	FY	FY 1990	PY	FY 1991
Line		_	Total		Total	_	Total	_	Total
Number	Description	Quant	Cost	Quant	Cost	Quant	Cost	Quant	Cost
6001	Other Equipment Purchases Costing   Under \$1M each		10.1		3.0		8.0		8.
G002	Purchase of Major ADP Equipment   System (PRMIS II)		ν,		7.2			<del>_</del>	
6003	Minor Construction		۲.		7.		<b>«</b> .		9. 
	Grand Total Navy Publication   and Printing Service		11.3		1 10.4		 8.		0.6
								. <b>_</b> _	·
	~ ~								
							<del></del>		
						_ <b>_</b> .			
								. <u>-</u> -	. <u> </u>
				77				IF EXHIBIT ACP-1 Page 1 of 1	IT ACP-1

Industrial Fund/Activity Group/Activity    C. ACP-1 Line No. & Item   Continued   Continue	ASSRT CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	ALIZATION PROGRAM JUST (Dollars in Thousands)	GRAM JU	STIFICAT s>	ION SHEE	£			A. B.	A. BUDGET SUBMISSION BY 1990 /1991 DESCIDENT:	BMISSION	2,448.30.7	
C. ACP-1 L.     NIF/Wavy Publication and Printing Service/WPPS   G001     FY 1988   FY 1989   FY 1989   FY 1989   G001     Unit   Total   Unit   Total   Unit   Total   Gost   G										BIENNIA	1		
G001   G001   FY 1989   Gost   Quant   Gost	B. Industrial Fund/Activity Gro	oup/Activit	ייא			-	ACP-1 Li	ine No.	f Item	Descript	ton		
F COST   Unit   Total   Unit   Total   FY 1989   FY 1989	NIF/Navy Publication and Pri	inting Serv	ice/NPP	٧ı			G001 ~ (	other Eq	uipment	Purchas	es Under	\$1M	
F COST   Unit   Total   Unit   Total   F COST   Quant   Cost   Co			FY 198	8		FY 198	6		FY 1990			FY 1991	
		-	Unit	Total		Unit	Total		Unit	Total	_	Unit   Total	Total
110,071   3,024   1   1   1   1   1   1   1   1   1	ELEMENTS OF COST	Quant	Cost	Cost	Quant	Cost	Cost	Quant	Cost	Total	Quant	Cost	Cost
	rinting Equipment			110.071			3.024			1 971			36.4
				1,5,152			57, 1			1/6'/			\$cc.,6 1
			_										
					_	_	_	_	_	_	_	_	_
		_		_	_	_	_	_	_	_	_	_	_
						_	_	_	_		_	_	_

initiatives in electronic information storage, retrieval, multi-media output and distribution of navy printing and publishing. electronic preparation, production, and distribution of full page images. Various automated systems will be procured by NPPS digital format; storage and retrieval systems to access and print digital data; and high speed electronic printing systems to data for preparation of documentation for final production; scanning systems for the conversion of existing hardcopy data to output digital data on demand. As NPPS continues to migrate to an information processing entity, conversion of traditional electronic printing systems, and scanning equipment in support of our continuing expansion to electronic printing. A good NAPS incorporates state-of-the-art publishing and printing technologies for transition to a digital technical information to implement the NAPS concept within Navy. These automated systems will include publishing systems to accept the digital database with a print-on-demand capability. NAPS will integrate independent data bases to process information utilizing FY 1989 - FY 1991 capital equipment funds will be used to purchase various automated publishing systems, high speed portion of the program is devoted to the Navy Automated Publishing System (NAPS) which is the overall concept for all environments is required.

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	ATION PRO	GRAM JU	STIFICAL	TON SHE	į,			A. BU	BUDGET SUBMISSION	MISSION			_
(Doll	(Dollars in Thousands)	puesnoų,	ŝ					-	FY 1990/1991 PRESIDENT'S	91 PRES	IDENT'S		-
									BIENNIAL				_
B. Industrial Fund/Activity Group/Activity	/Activit	<b>&gt;</b>			- c	C. ACP-1 Line No. & Item Description	ne No.	E Itom D	escripti	no.			_
					-								_
NIF/Navy Publication and Printing Service/NPPS	ing Serv	ice/NPP	s,		_	G002 - 1	urchase	of Majo	G002 - Purchase of Major ADP Equipment - PRMIS II	luipment	- PRMIS	11	_
					_								_
		FY 1988	∞		FY 1989	6		FY 1990			FY 1991		
	  -	Unit	Unit   Total	_	Unit	Unit   Total		Unit	Unit   Total		Unit   Total	Total	
ELEMENTS OF COST	Quant	Cost	Cost	Quant	Cost	Quant   Cost   Cost   Quant   Cost   Cost   Quant   Cost   Total   Quant   Cost   Cost	Quant	Cost	Total	Quant	Cost	Cost	_
	_	_	_	_	_	1		_			-		-
Hardware	_	_	_	_	_	60,709		_	_		_		_
Software	_	_	_	_	_	_		_	_		_		_
Minor Construction	_	_	_	_	_	1 400		_	_		_		_
Development Cost	_	_	005	_	_	- 80		_	_		_		_
	_	_	_	_	_	_		_	_		_		_
Total	_	_	200	_	_	1 7,189		_	_		_		_
	_					,					_		_
													_

objectives of PRMIS II are to satisfy NPPS functional requirements; eliminate the deficiencies of the current system; produce batch and interactive programs meeting functional and performance requirements specified. PRMIS II will meet the management a financial management and accounting system which meets NAVCOMPT and GAO standards; employ advanced technologies now being PRMIS II will be a total management information system which will replace the present automated cost and financial and reprographics subsystems (PRMIS I), and automate a number of manual functions. The total system will be a combination of information needs of NPPS headquarters and facilities throughout the continental United States and abroad. The basic widely applied in the development of modern automated business and information management systems; be fully automated; provide on-line interactive data entry, update and query of a set of distributed data bases; and utilize source data automation equipment in the job entry and production operatices.

ASSET CAPITAL: (Dc	ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	M JUSTIF sands)	ICATION SH	EET				BUDGET SUBMISSION FY 199C/1991 PRESIDENT'S BIENNIAL	BMISSION 991 PRES	I DENT'S	
B. Industrial Fund/Activity Group/Activity	oup/Activity			ن 		ACP-1 Line No. & Item Description	& Item	Descript	ion		
NIF/Navy Publication and Printing Service/NPPS	cinting Service,	/NPPS		<b>-</b>	. G003	G003 - Minor Construction	nstruct	ion			
	FY	FY 1988		FY 1989	686		FY 1990	۰		FY 1991	
ELEMENTS OF COST		Unit   Total	tal   st   Quant	Unit	Total   Cost	Quant	Unit	Total	Quant	Unit	Total
   Minor Construction			1 969	<u> </u>	   225			1 785			624
	<b>-</b> -	- <b>-</b>									
	·		<del>-</del>								
						_					
Narrative Justification:											
FY 1989 - FY 1991 minor construction funds will be used to modify existing space to accommodate electronic page printing   and automated publishing systems which support the various Navy Automated Publishing Systems (NAPS) initiatives.	istruction funds is which support	s will be t the vau	e used to   rious Navy	modify e Automat	xisting ed Publi	space to shing Sys	accommo	date ele APS) ini	ctronic   tiatives	page pri	nting

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ORDERACE PACTLITIES
DEPARTMENT OF THE MAY:
HANT INDUSTRIAL FUED
ASSET CAPITALISATION PROGRAM
FT 1990/1991 PRESIDENT'S BIRMIAL BUDGET
(Dollers in Millions)

	_	_	FY 1988	2	FY 1989	2	FY 1990	FY 1991	991
Line	Item	_	Total	_	Total		Total		Total
Number	Description	Quant	Cost	Quant	Quant   Cost	Quant	Cost	Quant	Cost
H001	CAD System	7	<del>-</del>	]_,					
H002	CAD Workstation	~	, _		<b>.</b> .				
нооз	CAD System		ı 						
H004	CAE Design Workstation								
H005	CAD Station - Training		- <del>-</del>		_ ~				
900н	CAD Station - DIT-MCO	 							_
H007	CAD/CAM Equipment								
H008	CAD/Film Plotter	<b>-</b>	-: 						
600н	)   CAD/CAM System								7
но10	CAD Workstation						· ·		
H011	   CAD/CAM Upgrade					<b>.</b>	~.		
но12	   CAD/CAM System Upgrade					, m	7:		
но13	   CAD Workstation					~			
H014	   CAD/CAM Equipment					~			
H015	CAD/CAM System					~			
								IF EXHIBIT ACP-1	T ACP-

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ORDERNICE PACTLITES
UPDARTHERY OF THE MAY
MAY INDUSTRIAL PURD
ASSET CAPTALLEATION PROGRAM
FY 1990/1991 PRESIDENT'S BIRMHIAL BUDGET
(Dollars in Millions)

_		7	FY 1988	. YY	FY 1989	77	FY 1990	L.	FY 1991
- Line	[ Item	_	Total	_	Total	_	Total	_	Total
Mumber	Description	Quant	Cost	Quent	Cost	Quant	Quant   Cost	Quent	Cost
H016	   Disk Drive 600MB (CAD/CAM)						,		
   H017	CAD Upgrade								ਾਂ 
H018	CAD System Equipment							<b>-</b>	न् 
H019	CAD/CAM Printer								-: 
H020	CAD Software Upgrade	<b></b>						ا	-
	   Subtotal CAD/CAM Equipment/System						· · ·		~· ~ ~
H021	DPS -8 Mainframe Upgrade			·		·		~ .	
H022	Office Automation Upgrade	·	1.6		₹.				
но23		·	1:1						
H024	Distr Information System Upgrade	<b>-</b>	m,					<b></b> .	
H025	Honeywell Upgrade	- 	1.0		νį				2.0
H026	VAX Computer System				1:0				
н но 27	Scientific and Eng Computing				1.5		1.6	~ ~ .	1.2
		~							
		_							
								IF EXHIBIT ACP-1	IT ACP-1

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ASSET CAPITALISATION PROGRAM PT 1990/1991 PRESIDENT'S BIRMITAL BUDGET (Dollars in Millions) ORDRANCE PACILITIES DEPARTMENT OF THE RAY HAVY INDUSTRIAL PURD

		FY 1	FY 1986	1. 1.1	FY 1989	2	FY 1990	- [	FY 1991
Line	Item		Total		Total		Total	_	Total
Number	Description	Quent	Cost	Quent )	Cost	Quant   Cost	Cost	Quent	Cost
H028	Central Office Automation				<b>.</b>	 	9		
	Subtotal - ADP Systems Greater   than \$1 M		. <del>1</del>		4.2		1 2.2		3.6
H029	PC Board Manufacturing System				- 0.				
но з о	I/O Mark 50 Torpado Pacility   MILCON P-748	<b>-</b> -		- <del></del> -	] _				
	Subtotal - New Capability Equipment		- <b>-</b> -		• 	<del>-</del>	년 	- <del></del> -	
H031	High Density Storage System				<del>*</del> .		s: 		 «:
Н032	Local Area Network		m. 		. <del></del> .		m. 		
H033	Torpedo Disassembly Robot		-					. <del>.</del> .	_
	Subtotal - Modernization   Initiatives 	~	 •:	. <i></i>	·		••••••••••••••••••••••••••••••••••••••	. <b></b> .	·.
H034	25-Ton Portal Crane		3.5				_ ~ -		
H035	Phone System		1.9		1:8				
H036	Wire Harness System		1.5		·				_
			83	_			i	IF KEHIBIT ACP-1 Page 3 of 5	IIT ACP-

MANY INDUSTRIAL FUND
ASSET CAPITALISATION PROGRAM
FT 1990/1991 PRESIDENT'S BIENNIAL BUDGET
(Dollars in Millions) ORDHANCE PACTLITIES DEPARTMENT OF THE MAY

		FY 1	FY 1988	FY :	1989	Y	FY 1990	FY	FY 1991
Line	Item	_	Total		Total	_	Total		Total
Number	Description	Quent	Cost	Quant	Cost	Quant   Cost	Cost	Quant	Cost
H037	Hydrospin Rebuild		1:1			<u>.</u> _		_	
   H038	75-Ton Granes Truck Mounted	m 	1:1						
H039	   150 Gallon Mixer		1.0						
H040	Lining Machining	- -	1.0						
H041	Vertical Mixer	 -	1.0						
H042	Command Comm System				1.0		5.0		6.0
H043	Technical Collateral Equipment   for MILCON P059			16	2:1	16	2.0		
H044	   Railcars (Flatcars/Boxcars)					10	0.5	80	5.
	Subtotal - Equipment Greater   Than \$1M		12.1		e. g.		10.5		6.5
н045	   Ordnance Management System		1.1		1.1				
H046	   Industrial Logistics Support MIS		1.5		1:1		6.		
H047	Gun System Eng Support System		9		s:	۲.	<u> </u>		_
	Subtotal - MIS Greater Than \$1M		3.5		2.7		8:1		<del>.</del>
			7						
			78				н	IF EXHIBIT ACP-1 Page 4 of 5	T ACP-1

ASSET CAPITALIZATION PROGRAN FT 1990/1991 PRESIDENT'S BIENNIAL BUDGET (Dollars in Millions) ORDERNICE FACILITIES
DEPARTMENT OF THE MAY
MAY INDUSTRIAL FUND

		7.4	FY 1988	FY 1	FY 1989	FY 1	FY 1990	FY	FY 1991
Line	- Item	_	Total		Total		Total		Total
Number	Description	Quant	Cost	Quant	Cost	Quant   Cost	Cost	Quant	Cost
H048	Equipment Less Than \$1M		53.3		32.1	] ]	25.1		31.4
	Subtotal - Equipment Less Than \$1M	- <b>-</b> -	53.3		32.1		25.1		31.4
H049	Mgmt Info Sys Less Than \$1M		1.5		1:8				7
	   Subtotal - MIS Less than \$1M 		1.5		1.8		 -		
H050	Minor Construction		5.9		6.5		9.9		9.9
	Subtotal - Minor Construction		5.9		6.5	<b>.</b>	9.9		9.9
	GRAND TOTAL	<u> </u>	82.2		52.3		48.2		50.1
		~ <b>~</b>							
		. <b>_</b>				<b>.</b>			<b>.</b>
								IF EXHIBIT ACP-1	IT ACP-1
			85					Page 5 of	of 5

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ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	TION PRO	GRAM JUS	TIFICAT	TON SHEE				٠ ۲	A. BUDGET SUBMISSION	MISSION			ı <sup>_</sup>
rIod)	(Dollars in Thousands)	porsnoq	=					<u>.</u>	FY 1990/1991 PRESIDENT'S	91 PRES	IDENT'S		_
									BIENNIAL				ヿ
B. Industrial Fund/Activity Group/Activity	/Activit	۸.				C. ACP-1 Line No. & Item Description	ine No.	f Item	Descripti	uoı			_
					_								_
MIF/ORDHANCE/WPNSTA Yorktown						H009 - CAD/CAM System	CAD/CAM	System					
		FY 1988			FY 1989			FY 1990			FY 1991		
		Unit   Total	Total		Unit	Unit   Total		Unit	Unit   Total		Unit	Unit   Total	_, _
	Quent	Cost	Cost	Quant   Cost   Cost   Quant   Cost   Quant   Cost   Total   Quant   Cost   Cost	Cost	Cost	Quent	Cost	Total	Quent	Cost	Cost	-
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Equipment	_	_		_	_	_	- -	110	110	_	150	150	_
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copies of engineering drawings of weapon systems under the in-service engineering control of the Command. This system will be a multi-user system for digitizing, developing, manipultaing, and producing hard The CAD/CAM system will give the activity its first computer aided drafting capability.

No productivity gains are anticipated in the first year base on the workload to establish the data base. However, in the second and subsequent years, annual productivity savings are estimated to be \$175K.

ASSET CAPITALISATION PROGRAM JUSTIFICATION SHEET	TION PRO	GRUM JU	TIFICAT	ION SHEE				A. B	A. BUDGET SUBMISSION	MISSION		
(Doll to the control of the control	(Dollars in Thousands)	boussand				!		<b>.</b> _	1990/199 BIENNIAL	FY 1990/1991 PRESIDENT'S BIENNIAL	DENT'S	
B. Industrial Fund/Activity Group/Activity	/Activit	٨			-	C. ACP-1 Line No. 6 Item Description	ne No.	I Item C	escript	uoj		
NIF/ORONANCE/NAVMPNSUPPCEN CERNA	2					H010 - CAD Workstation	MOEK	station				
		FY 1988			FY 1989			FY 1990			FY 1991	
		Unit	Unit   Total		Unit	Unit   Total		Unit	Unit   Total		Unit   Total	Total
	Quant	Cost	Set	Quant	8	Quant   Cost   Cost   Quant   Cost   Cost   Quant   Cost   Total   Quant   Cost   Cost	Quant	S	Total	Quant	Cost	S
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Equipment		_	_	_			<b>-</b>	- 5 <b>7</b>	5			
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	_	_									_	

The CAD/CAM workstation will be used to automete maintenance and to prepare engineering drawings and technical data packages for physical security equipment. Presently, drafting, design, engineering and graphic generations are performed manually. The use of CAD equipment would enhance productivity by a factor of three.

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ASSET CAPITALIZATION PROCESM HISTIFICATION SHEET	TION PRO	CRAM JUS	TIFICAT	TON SHEE				A. B.	A. BUDGET SUBMISSION	MISSION			. –
(0011	(Dollars in Thousands)	housand	-		ı			£	FY 1990/1991 PRESIDENT'S	991 PRES	IDENT'S		_
									BIENNIAL				_
B. Industrial Fund/Activity Group/Activity	/Activit	Ą			- C.	C. ACP-1 Line No. & Item Description	Ine No.	f Item D	escript	lon			_
					_								_
NIF/ORDNANCE/NAVWENSUPPCEN Crane	ę					H011 - CAD/CAM Upgrade	ND/CN	Opgrade					
	_	FY 1988		_	FY 1989			FY 1990			FY 1991		
	_												_
	_	Unit	Unit   Total		Unit	Unit   Total		Unit	Unit   Total		Unit	Unit   Total	_
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This is an automatic system which electronically prepares designs in graphic form, parforms mathematical modeling of the design's performance, performs rapid modifications to the design, and quickly repeats the design, model, evaluate loop. The consideration those factors shown to be sensitive or inadequate during test. When the design is released for service use, machining equipment. This will provide rapid fabrication of evaluation prototypes which confirm the model's accuracy and satisfying the design specifications, the engineer or draftsman would modify the design and repeat the loop, taking into system will automatically produce the construction prints and generate the control programs for the numeric-controlled which will be used for requisite safety and performance testing. Should the prototype testing reveal deficiencies in the design need only have annotations made; there would be no need to re-enter the design. Page 3 of 32

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	Page

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	TION PRO	GRAM JUS	STIFICAT	TON SHEE	-			A. BE	A. BUDGET SUBMISSION	BMISSION		
I (001)	(Dollars in Thousands)	housand	•					-	Y 1990/1	FY 1990/1991 PRESIDENT'S	IDENT'S	
									BIENNIAL	ان		
B. Industrial Fund/Activity Group/Activity	/Activity	>			ပ် —	C. ACP-1 Line No. & Item Description	ine No.	f Item I	Descript	ton		
_					_							
NIF/ORDNANCE/NAVMPNSUPPCEN Crane	9					H012 - CAD/CAM System Upgrade	CAD/CAM	System (	Upgrade			
	-	FY 1988			FY 1989			FY 1990	0		FY 1991	
_	_	Unit   Total	Total		Unit	Unit   Total		Unit	Unit   Total	_	Unit   Total	Total
	Quant	Cost	Cost	Quant	Cost	Quant   Cost   Cost   Quant   Cost   Quant   Cost   Total   Quant   Cost   Cost	Quant	Cost	Total	Quant	Cost	Cost
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Equipment	_	_	_	_	_	_	<b>-</b>	08	08	_	_	
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### Narrative Justification:

This is an additional workstation to upgrade the present CAD system which is used to support ALQ-99 engineering/production production requirements. All engineering/production schematics, diagrams, drawings, etc. are generated using this system. Due to increase workload, this additional workstation is necessary.

B. Industrial Fund/Activity Group/Activity     C. ACP-1 Line No. & Item Description		ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	ALIZATION PROGRAM JUST (Dollars in Thousands)	RAM JUS	TIFICAT:	ION SHEET	_			A. A.	A. BUDGET SUBMISSION FY 1990/1991 PRESIDENT'S	MISSION 91 PRES	IDENT'S	
H013 - CAD Workstation   FY 1968   FY 1969   FY 1990     Unit   Total   Unit   Total   Unit   Total     Quant   Cost   Cost   Cost   Quant   Cost   Total     H	_ <u>_</u>	Industrial Fund/Activity Group	Activit	<b>\</b>			-	ACP-1 L	ne No.	f Item	BIENKIA	lon		
FY 1968   FY 1969   FY 1990		NIF/ORDNANCE/NAVMPNSUPPCEN CER	9					H013 - C	AD Work	station				
Unit   Total     Unit   Total     Unit   Total     Quant   Cost   Cost   Quant   Cost   Total   Quant	_			FY 1986			FY 1989			FY 199(			FY 1991	
	_ _		_	Onit	Total		Unit	Total		Unit	Total		Unit	Total
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	<u> </u>	uipment							N .		<b>*</b>			
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technicians to generate design concepts and models in support of electronic systems development. Analysis may be performed documentation prepared by CAD operators of draftsmen. The engineering sketches exist within a system or program data base These workstations eliminate the duplication that exists between engineering sketches or conceptual drawings and final on mechanical elements and design informtion or concepts can be readily used by documentation technicians to facilitiate and are used by the CAD operator in generating the final design documentation. This will allow design engineers and developing the finished documentation.

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	ATION PRO	CERNA JUS	STIFICAL	ION SHEET			  -  -	A. BC	A. BODGET SUBMISSION	MISSION		
l (Do1	(Dollars in Thousands)	housend	•					_	FY 1990/1991 PRESIDENT'S	991 PRES	IDENT'S	
									BIENNIAL			
B. Industrial Fund/Activity Group/Activity	p/Activit	<b>.</b>			<u>ပံ</u> 	C. ACP-1 Line No. 4 Item Description	ne No.	f Item E	Sescript.	ion		
NIF/ORDNANCE/NAVORDSTA Louisville	4110					HO14 - CAD/CAM Equipment	AD/CAM	Squipmen	¥			
		FY 1988	6		FY 1989			FY 1990			FY 1991	
	_	1 Unit	Unit   Total		onit (	Unit   Total		Onit	Unit   Total		Unit   Total	Total
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Equipment	_	_	_	_	_	_	8	8	180	_	_	
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These four workstations are to augment the existing CAD/CAM system to meet the needs of additional users and increase capabilities due to expanded workload.

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ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET) (Dollars in Thousands)	ALIZATION PROGRAM JUST (Dollars in Thousands)	GRAM JUS	STIFICAT )	ION SHEE	F			# E	A. BUDGET SUBMISSION FY 1990/1991 PRESIDENT'S	MISSION 991 PRES	IDENT'S		
B. Industrial Fund/Activity Group/Activity	/Activit	_			<u>.</u>	ACP-1 L	Ine No.	f Item	C. ACP-1 Line No. 4 Item Description	lon			_, _
NIF/ORDNANCE/WENSTA Earle						H015 -	H015 - CAD/CAM System	System					
		FY 1988			FY 1989	6		FY 1990			FY 1991		_,
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Software Systems	_	_	_	_	_	_	2	1 45	06	_	_	_	_
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The CAD/CAM system will allow the station to handle additional workload associated with the Handling Center Department's designation as the "Center of Excellence" for all NAVSEA and NAVAIR containers and handling equipment.

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Fit 1990   PRESIDENT S	Fr 1980   Parallal	C. ACP-1 Line No. 6 Item Description     R1980			!			i			-	
C. ACP-1 Line No. & Item Description   Part   Pund/Activity Group/Activity   C. ACP-1 Line No. & Item Description   Part   Par	ROI6 - CAD/CMM Disk Drive (60048)	C. MGP-1 Line No. 6 Item Description   NAMP-CANCERS Earle		(Dollars in Thousands)				£; 	F 1990/1: BIENNIA	991 PRES L	IDENT'S	
FY 1988   FY 1989   FY 1990	FY 1989   FY 1989   FY 1999   FY 1990   FY 1	FY 1969   FY 1969   FY 1969   FY 1969   FY 1990   FY 1		Group/Activity	1	CP-1 Li	ne No.	Item I	)escript	ion		
### The control of th	FY 1986   FY 1980   FY 1980   PR 1	FY 1980   FY 1980   FY 1980   FY 1980   FY 1980   PY 1	f/ordnance/wensta Earl	9		016 - ຕ	AD/CAM 1	Jisk Dr:	lve (600	<u> </u>		
Unit   Total     Unit   Total     Unit   Total     Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Quant   Cost   Total   Cost   Total   Quant   Cost   Total   Cost   C	Onit   Total     Onit   Total     Onit   Total     Onit   Total     Onit   Total   Onit   Total   Onit   Total   Onit   Total   Onit   Total   Onit   Total   Onit   Total   Onit   Total   Onit   Total   Onit   Total   Onit   Total   Onit   Total   Onit   Total   Onit   Total   Onit   Total   Onit   Onit   Total   Onit   Total   Onit	Onit   Total   Onit   Total   Onit   Total     Quant   Cost   Cost   Cost   Quant   Cost   Quant   Cost   Quant     Quant   Cost   Cost   Quant   Cost   Quant   Cost   Quant		FY 1988	FY 1989			FY 1990			FY 199	
Obstification:	Unstification:  Be disk drive is needed to accommodate the additional demand on the existing CAD/CAM system.	## disk drive is needed to accommodate the additional demand on the existing CAD/CAM system.		Unit   Total     Cost   Cost		Total	Quant	Unit	1 — —	Quant	Cost	Total
ve Justification:  OO MED disk drive is needed to accommodate the additional demand on the existing CAD/CAM system.	ve Justification:  OO MED disk drive is needed to accommodate the additional demand on the existing CAD/CAM system.	is needed to accommodate the additional demand on the existing CAD/CAM system.	ive					25			·	
ve Justification:  00 MB disk drive is needed to accommodate the additional demand on the existing CAD/CAM system.	ve Quatification:  OD MED disk drive is needed to accommodate the additional demand on the existing CAD/CAM system.	is needed to accommodate the additional demand on the existing CAD/CAM system.										
ve Justification:  00 MB disk drive is needed to accommodate the additional demand on the existing CAD/CAM system.	Ob MB disk drive is needed to accommodate the additional demand on the existing CAD/CAM system.	is needed to accommodate the additional demand on the existing CAD/CAM system.		·							<b></b> ·	
ve Justification: 00 MB disk drive is needed to accommodate the additional demand on the existing CAD/CAM system.	omega disk drive is needed to accommodate the additional demand on the existing CAD/CAM system.	is needed to accommodate the additional demand on the existing CAD/CAM system.		 								

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	ALIZATION PROGRAM JUST (Dollars in Thousands)	CORNAM JU	STIFICAT	ION SHEET	ŧ			A.	A. BUDGET SUBMISSION FY 1990/1991 PRESTRENT'S	BMISSION 991 PRES	TOPPATY S	
		'							BIENNIAL	د :		
B. Industrial Fund/Activity Group/Activity	ap/Activit	Ā:			ပ် -	C. ACP-1 Line No. & Item Description	ine No.	f Item	Descript	ton		
HIF/ORGHUNCE/HAVUSEAMRENGSTA Kayport	A Keyport					H017 - C	H017 - CAD Upgrade	ade.				
		FY 1988			FY 1989	6		FY 1990	6		FY 1991	
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This project will upgrade the Computervision portion of the CAD system by enhancing capabilities and lowering maintenance costs. Productivity will be increased y the system enhancements. It will reduce the space requirement, eliminate the need for air conditioning, reduce training time, and maintain a higher level of expertise among the users. In 5 years, the updrage will save at lease \$159K in maintenance costs.

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	FION PRO	GRAM JUS	TIFICAT	TON SHEE	E			A. BK	A. BODGET SORMISSION	MISSION			1
(Polls	(Dollars in Thousands)	housands	2						FY 1990/1991 PRESIDENT'S	91 PRES	IDENT'		_
									BIENNIAL				_
B. Industrial Fund/Activity Group/Activity	/Activit	۵.			ე —	C. ACP-1 Line No. & Item Description	ine No.	f Item I	escripti	uo.			_
					-								_
NIF/ORDNANCE/NAVORDSTA Louisville	911				_	H018 -	H018 - CAD System Equipment	em Equip	ment				_
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	_	FY 1988	_	_	FY 1989	6	_	FY 1990	_		FY 1991	1	-
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This project will maintain, expand and integrate current and future engineering computer aided applications to improve task productivity, to issue of quality products and to achieve "design to manufacturing" capability. The CAD system is used to develop, prepare and revise mechanical detail, assembly, printed wiring board and all other types of engineering drawings required to support fleet and logistic procurement and manufacturing requirements.

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	TION PRO	CORNA JU	STIFICAL	ION SHEE	E			A. BC	BUDGET SUBMISSION	MISSION		
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						ļ			BIENNIAL	. 2		
B. Industrial Fund/Activity Group/Activity	/Activit	*			<u>.</u>	C. ACP-1 Line No. & Item Description	Ine No.	I Item L	<b>Mescript</b>	lon	   :	
NIF/ORCNANCE/NAVSHIPMENSYSENGSTA Port Hueneme	TA Port	Rueneme				H019 - C	H019 - CAD/CAM Printer	Printer				
	_	FY 1988			FY 1989			FY 1990			FY 1991	
	_	Unit	Unit   Total	_	l Onit	Unit   Total	_	Outt	Unit   Total	_	Onit	Unit   Total
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Inis project will provide capability to produce up to 11" X 45" foldout pages for Navy TM's. Currently, this capability is being performed by a contractor; procuring this printer would reduce the lead time of obtaining these pages and reduce the cost of production.

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	ATION PR	XCROAM JU	STIFICAT	ION SHEE				A. BC	A. BUDGET SUBMISSION	MISSION			1
l (Do.)	(Dollars in Thousands)	housend	(a					_	FY 1990/1991 PRESIDENT'S	991 PRES	IDENT'S		_
									BIENNIAL				_
B. Industrial Fund/Activity Group/Activity	p/Activit	<b>.</b>			<u>ပ</u>	C. ACP-1 Line No. & Item Description	Ine No.	6 Item D	escript	lon			_
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NIF/OFCNANCE/WFNSTA Earle						H020 -	CAD Soft	HO20 - CAD Software Upgrade	rade				_
	-	FY 1988			FY 1989			FY 1990			FY 1991		_, _
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	-	Unit	Unit   Total	-	Unit	Unit   Total	_	Unit	Unit   Total	_	Unit   Total	Tota	ı
	Quant	Cost	Set	Quant   Cost   Cost   Quant   Cost   Cost   Quant   Cost   Total   Quant   Cost   Cost	Cost	Cost	Quant	Cost	Total	Quant	Cost	Cost	П
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Equipment	_	_	_	_	_	_	_	_		-	1 75	1 75	_
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This software will enhance the capabilities of the mainframe by improving performance by 20% and provide better response | time. Improved features include hidden line removal, solid modeling an improve interface capabilities of UNIX to CGOS file transfer.

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ASSET CAPITALISATION PROGRAM JUSTIFICATION SHEET	TION PRO	GRAM JUS	TIFICAL	TON SHEET	H			A. BE	A. BODGET SUBMISSION	MISSION			_
(001)	(Dollars in Thousands)	housenod	=					<u>.</u>	FY 1990/1991 PRESIDENT'S	91 PRES	IDENT'S		_
								1	BIENNIAL				_
B. Industrial Fund/Activity Group/Activity	/Activit	*			<u>υ</u>	ACP-1 L	ine No.	f Item D	C. ACP-1 Line No. & Item Description	uo			_
•					_								_
NIF/ORDWAKE/NAVSHIPWRNSYSENGSTA Port Bueneme	TA Port	Buenette			_	H022 - (	H022 - Office Automation	utometic	Ě				_
					4								_
	_	FY 1988	_	_	FY 1989		_	FY 1990	_		FY 1991		_
													_
	_	Unit	Unit   Total		Onit	Unit   Total	_	Unit	Unit   Total		Unit   Total	Total	-
	Quant	Cost	S	Quant	Cost	S	Quant	Set	Quant   Cost   Cost   Quant   Cost   Cost   Quant   Cost   Total   Quant   Cost   Cost	Quant	Cost	Cost	_
	_	_		_	_		_	_	- -		_		_
Equipment - Phase I & II	- -	267	567	_	960	360	_	_	_		_		_
	_	_		_	_	_	_	_	_		_		_
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The Office Automation System will provide additional administrative support and improve productivity. Additional capabilities are in the areas of electronic mail, calendar management, file sharing, word processing, spreadsheets, database management, and graphics. Estimated labor savings are approximately 15%, based on elimination of manual retyping of correspondence, automatic filling, etc. Page 13 of 32

			ABBET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	TON SHEET	<b>J</b>		_	– A. M	DOET SU	A. BUDGET SUBMISSION		
	(Dollars in Thousands)	ponesnoq	2						FY 1990/1991 PRESIDENT'S BITENIAL	991 PRES.	IDENT'S	
B. Industrial Fund/Activity Group/Activity	roup/Activit	   			-	C. ACP-1 Line No. 6 Item Description	ne No.	t Item	Descript.	ton	<u>.</u>	
NIF/ORGNANCE/NEWSTA Seal Beach	qp <b>e</b>					HO23 - Honeywell Replacement	loneywe1.	l Replax	<b>Seme</b> nt			
		FY 1988			FY 1989			FY 1990			FY 1991	
	-	Onit	Unit   Total		Onit	Unit   Total		Unit	Unit   Total		Unit   Total	Total
	Quant	Cost	Cost	Quant	Coat	Quant   Cost   Cost   Quant   Cost   Cost   Total   Quant   Cost   Cost	Quant	Cost	Total	Quant	Cost	8
	-	_	_	_	_	_	_	_	_		_	
Equipment - Phase I & II	 	11,081   1,081	1,081								705	<b>4</b> 05
			-						. <b>-</b>	. <b>_</b>	- -	
		_	_	_	_			_	_	_	_	_
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	_	_			_							

The Honeywell DPS-8/49D Business and Logistics (B&L) host computer is being replaced because of increased on-line users and it will be nearing the end of its useful life in the FY 89-90 timeframe. The B&L data processing environment at the station is rapidly evolving from batch processing to full on-line transaction processing through a data base management system. With a local area network now installed which allows all four sites to access B&L, new users are being added on a continuous basis.

system, the DPS-8/49D will generate backlogs, overtime, and downtime, and downtime until it is replaced with state-of-the-art The DPS-8/49D is a mid-range computer, originally purchased as an 8/44D, with batch processing in mind. Without the capacity to support the 1,000-2,000 users expected in FY 89, performance will degrade, especially in response time. The previous average of a two seconds response time has become 10 to 15 second in FY 1988. This high response time coupled with excessive downtime will rault in considerable productivity losses. Rather than being on effective and efficient equipment. Page 14 of 32

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ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	rion PRO are in T	ALIZATION PROCERAM JUST (Dollars in Thousands)	STIFICAT 1)	ION SHEE	F				BUDGET SUBMISSION FY 1990/1991 PRESIDENT'S BIESNIAL	MISSION 91 PRES	IDENT'S	
B. Industrial Fund/Activity Group/Activity	Activit	<b>X</b>			ပ် 	ACP-1 Li	he No.	i Item [	C. ACP-1 Line No. & Item Description	60		
NIF/ORDNANCE/NAVMPNSUPPCEN CEAN	•					H025 - H	loneywel]	Proces	H025 - Honeywell Processor Upgrade	ade		
		FY 1988			FY 1989			FY 1990			FY 1991	]
	Quant	Cost	Unit   Total	Quant	Unit	Unit   Total   Cost   Cost	Quant	Unit   Total   Cost   Total	Unit   Total   Unit   Total   Unit   Total   Unit   Total   Unit   Total   Ounit   Total   Ounit   Total   Quant   Cost   Cost	Quant	Unit	Unit   Total
Equipment - Phase I & II		11,002   1,002	1,002		200	200					2,020	12,020   2,020
				<del>-</del>								

The current management systems will not meet requirements to support the activity's mission for the next five years. This upgraded system will be able to handle additional users and new applications by utilizing the additional processor and communications capability. The proposed upgrades will permit the addition of approximately 50 users per year. The personnel savings are calculated at 18% per year for users.

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	ALIZATION PROGRAM JUST (Dollars in Thousands)	CRAM JUS	TIFICAT	ION SHEE				A. 80	A. BODGET SUBMISSION FY 1990/1991 PRESIDENT'S	MISSION 91 PRES	DENT'S		
B. Industrial Fund/Activity Group/Activity	p/Activit	٠,			Ü	C. ACP-1 Line No. 6 Item Description	Ine No.	Item D	• earlpti	, E			-, :
NIF/ORDNANCE/NAVSHIPWRNSYSENGSTA Port Hueneme	STA Port	Rueneme				H026 - (	H <sup>0</sup> 26 - Computer VAX 8800	VAX 880	0				
		FY 1988			FY 1989			FY 1990			FY 1991		-,
	-	Unit	Unit   Total		Unit	Unit Total		Unit   Total	Total		Unit	Unit   Total	
	Quant	Quant   Cost   Cost		Quant	Cost	Quant   Cost   Cost   Quant   Cost   Total   Quant   Cost   Cost	Quant	Cost	Total	Quant	Cost	Cost	$\neg$
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Equipment	_	_	_	-	666	666	_	_	_		_	_	_
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The purchase of a VAX 8800 computer system is needed to support the projected workload particularily as the In-Service Engineering Agents for shipboard weapons systems. This computer acquisition will provide a complete system which enable the station to accomplish the essential tasks assigned. Otherwise, the work must be performed through contractor support. The cost avoidance would be approximately \$1,430K.

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B. Industrial Fund/Activity Group/Activity							_	DIMMITAT			
The Additional Management and the Control of the Co	ty			·	ACP-1 L4	Ine No.	f Item	C. ACP-1 Line No. & Item Description	log		
MIR/UNINAL/MENSIN SOLI BORGII					H027 - S	Boientif	io 6 En	R027 - Scientific & Engineering Computing	g Comput.	tng	
	FY 1988	6		FY 1989			FY 1990	0		FY 1991	
	l Unit	Unit   Total		Unit   Total	Total		Unit	Unit   Total		Unit	Unit   Total
Quant	Quant   Cost   Cost   Quant   Cost   Quant   Cost   Total   Quant   Cost   Cost	Sort	Quent	8	3	Quent	8	Total	Suant	8	S
Equipment - Phase I					1,544				- <b>-</b> -		
Equipment - Phase II & III					- <b></b>			1,640			1,250
L	1										

A. BODGET SUBMISSION

ASSET CAPITALISATION PROGRAM JUSTIFICATION SHEET

#### Narrative Justification:

The Scientific and Engineering Computing System is designed to provide efficient management and cost effective computing through maximum compatibility of equipment, software, and communications, and planned future investments. It will provide engineering and scientific computing capabilities to meet user needs on a cost-justified basis, and manage and control the and communication services to all technical departments within the station. It will assure adequate computing capacity use of external support services for maximum effectiveness.

The system will provide a single, comprehensive and consistent source of data of optimum statistics for combat systems activities, agencies and contractors, and is analyzed and reported using various methodologies which are not consistent. Without procurement of this system, information assets will remain underutilized, data base implementation will remain assurance of U.S. Navy Battle groups, platforms and systems. Currently, data is collected by various Navy commands, diffifult, and additional programming staff will be rewired to meet the station's needs.

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	TION PRO	SRAM JUS	TIFICAT	ON SHEE				A. BC	A. BUDGET SUBMISSION	MISSION		
(Dol1)	(Dollars in Thousands)	housende	=					_	FY 1990/1991 PRESIDENT'S	91 PRES	DENT'S	
									BIENNIAL			
B. Industrial Fund/Activity Group/Activity	/Activity	-			<u>ა</u>	ACP-1 L	C. ACP-1 Line No. & Item Description	f Item D	<b>Secript</b>	uo,		
					_							
NIF/ORGNANCE/NAVMENSUPPCEN Crane	•				-	H028 -	H028 - Central Office Automation	Office A	<b>untometic</b>	Ę		
					-							
	-	FY 1988	_	_	FY 1989		_	FY 1990			FY 1991	
							-					
	_	Unit   Total	Total		Unit	Unit   Total	-	Unit	Unit   Total		Unite	Unit   Total
	Quant	Cost	Set	Quant	Cost	Set	Quant   Cost   Cost   Quant   Cost   Quant   Cost   Total   Quant   Cost   Cost	Cost	Total	Quant	Cost	Cost
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Equipment	_	_	_	7	086	086	_	009 7	009	_	_	
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This is a centralized Office Automation System which will allewiate high input/output burden from the mainframe computers while allowing for standardisation in filling, report distribution, calendaring, etc. Bavings are derived from prevention of purchasing an estimated \$50% software yearly. An additional estimated savings of \$20% each year is for mail costs, telephone calls and 2% productivity improvement for 300 users in time lost due to inefficient methods at \$25 per hour.

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	TION PRO	CRUM JUS	STIFICAT	ION SHEE				A. B.	A. BODGET SUBMISSION	MISSICH		
(Dol1)	(Dollars in Thousands)	housand	ç					_	FY 1990/1991 PRESIDENT'S	91 PRES	IDENT'S	
									BIENNIAL			
B. Industrial Fund/Activity Group/Activity	/Activity	_			υ -	C. ACP-1 Line No. & Item Description	ine No.	f Item D	*secript:	uo:		
nif/ordnence/navordsta Louisville	110				<del>-</del>	ROO6 - PC Board Manufacturing System	C Board	Manufac	turing 8	ystem		
		FY 1988			FY 1989	6		FY 1990			FY 1991	
	_	Unit	Unit   Total		1 Unit	Unit   Total		Unit	Unit   Total		Unit   Total	Total
	Quent	Set	Set	Quant	Cost	Quant   Cost   Quant   Cost   Cost   Quant   Cost   Total   Quant   Cost   Cost	Quant	Cost	Total	Quant	Set	8
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Equipment	_	_	_	<b>.</b>	410	410		_	_		_	_
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The circuit board manufacturing system will provide the capability to manufacture prototype and small betchs of plated through hole printed circuit boards needed for prototype projects and to replane boards damaged beyond repair. Projects that will be supported by this system will be:

The MK 172 Amplifier 5"/54 Gan Mount

Digital Opgrade Program

MK 76 Amplifier

MK 6 Velocimeter

Support and Test Equipment Engineering Program (STEEP) Super ARBOC Program

Limited support on the PHALANX CIWS

This project would reduce the turnaround time from about one year for procurement to about a month with in-house menufacturing.

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(Dolla	re in 1	(Dollars in Thousands)	(g	İ				i.	FY 1990/1991 PRESIDENT'S BIENNIAL	991 PRES.	DENT'S	
B. Industrial Fund/Activity Group/Activity	Activit	<b>.</b>			<del>ບໍ່</del> -	C. ACP-1 Line No. & Item Description	se No.	6 Item !	Descript	ton		
NIF/ORDNANCE/WPNSTA Charleston						H030 - 1	nitial .	Outfitt	H030 - Initial Outfitting of MILCON P-748	a NOOTI	748	
		FY 1988			FY 1989	6		FY 1990			FY 1991	
		l Unit	Unit   Total		i Unit	Unit   Total		mit	Unit   Total		Unit   Total	Total
	Quant	Cost	Cost	Quant	Cost	Quant   Cost   Cost   Quant   Cost   Cost   Quant   Cost   Total   Quant   Cost   Cost	Quent	Cost	Total	Quant	Cost	8
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Equipment		_	_	_	_	<u>-</u>		150	150	_	_	
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HILCON P-748, the MK 50 Torpedo Facility, was congressionally approved for the FY 89 MILCON program. The initial contfitting efforts, including furnishings and other miscellaneous items, are required for the facility to be usable.

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	TION PRO	MAN JUS	TIFICAT	ON SHEET				A. B.	A. BUDGET SUPMISSION	MISSION		
(Doll)	(Dollars in Thousands)	spusenor	•						FY 1990/1991 PRESIDENT'S	991 PRES	IDENT'S	
									BIENTIAL			
B. Industrial Fund/Activity Group/Activity	/Activity				<del>ပ</del>	ACP-1 I	ine No.	f Item [	C. ACP-1 Line No. & Item Descr.ption	lon		
NIF/ORDNANCE/WENSTA Charleston						H031 - 1	digh Den	sity Sto	H031 - High Density Storage System	tem		
		FY 1988		-	FY 1989			FY 1990			FY 1991	
		Unit   Total	Total	-	Grift	Unit   Total		Unit	Unit   Total		Unit   Total	Total
ELEMENTS OF COST	Quant	Cost	Cost	Quant   Cost   Cost   Quant   Cost   Cost   Quant   Cost   Total   Quant   Cost   Cost	Cost	Cost	Quant	Cost	Total	Quant	Cost	8
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Equipment - Phase I & II	- ·	06	064		380	380	_	_			_	
Equipment - Phase III & IV		<b></b>		<b>-</b> -				069	06\$		7 06	067

The high density storage system is a multifaceted system which allows movement of stored components without having to relocate them. This system will support all ordnance programs within the activity and its main purpose is to reduce the handling/storage time. Other resulting factors include safety improvement and better inventory control of available assets. The estimated annual savings is \$74,720 from reduced inventory and handling cost.

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ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	ATION PRO	GRAM JUS	TIFICAT	ON SHEET				A. BO	A. BUDGET SUBMISSION	MISSIM		
1 (00)	(Dollers in Thousands)	housend	•					<u>.</u>	FY 1990/1991 PRESIDENT'S	91 PRES	IDEAT'S	
									BIESHIAL	. 1		
i B. Industrial Fund/Activity Group/Activity	o/Activit	>				MCP-1 L.	C. ACP-1 Line No. & Item Description	i Item D	*seript	lon		
NIF/ORDNANCE/NENSTA Charleston						H032 - 1	H032 - Local Area Network	Pa Wetwo	¥,			
		FY 1988	60		FY 1989			FY 1990			FY 1991	
	_	1 Unit	Unit   Total		Unit	Unit   Total		Ontt	Unit   Total		Unit	Unit   Total
	Quant	Cost	Cost	Quant   Cost   Cost   Quant   Cost   Cost   Quant   Cost   Total   Quant   Cost   Cost	Cost	Cost	Quant	Cost	Total	Quant	Cost	Cost
	-	-		_	_			_			_	
Equipment - Phase I & II	1	300	300	_	300	300		_	_	_	_	_
   Equipment - Phase III								 00: 	300	<b>-</b> -		
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The local area network will provide computer link-up within the activity to enable all computer systems to be tied together with the mainframe. This system will support all departments and provide electronic mail distribution. Currently, there is no interface remote terminals and computer systems and the telephone system is incapable of handling increased demand for the many systems.

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	TION PRO	CERNA JUS	STIFICAL	ION SHEE	1			A. B	A. BUDGET SUBMISSION	MISSION		
(Doll)	ars in I	(Dollars in Thousands)	•					_	FY 1990/1991 PRESIDENT'S	91 PRES	DENT'S	_
									BIENNIAL			-
B. Industrial Fund/Activity Group/Activity	/Activit	*			ບ່ -	ACP-1 L	Ine No.	f Item 1	C. ACP-1 Line No. & Item Description	uo		_
					-							_
NIF/ORDRINGE/NAVMPNSOPPOEN Crane	2					H035 - 3	<b>relecomm</b>	unicati	H035 - Telecommunications Equipment	ment		
	_	FY 1988		_	FY 1989		_	FY 1990			FY 1991	
	1											_
		Unit	Unit   Total	_	Unit	Unit   Total		Unit   Total	Total		Unit	Unit   Total
	Quant	Cost	Coat	Quant	Cost	Cost	Quant	Cost	Quant   Cost   Cost   Quant   Cost   Quant   Cost   Total   Quant   Cost   Cost	Quant	Cost	Cost
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Equipment	1 1	(1, 921 ( 1, 921	1,921	7	1 750	750	_	_	_		_	
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within the activity by installing digital private branch exchanges in buildings where existing telecommunications systems are inadequate to perform the mission requirements of the activity. The electronic key systems being replaced are too small for building needs and cannot be expanded to meet these needs. These electronic key systems will be reused in buildings which FY 1968 - This project wil improve the telecommunication equipment and serivces to sixteen (16) buildings/departments currently have single line phones installed, to allow for interbuilding communications and central attendant service.

Services Digit: 1 Network by 1990. Meintenance of the older 1A2 systems will be eliminated and savings would be approximately The Department of the Navy has undertaken a program to enhance the telecommunications network by implementing Integrated 3 manyears.

PY 1989 - Procurement of Remote Line Concentrating Modules (RLCM) is required to improve telecommunications services in the following area: B-13, B-2930 Complex, B-3031 & Warshouse Area, B-2540 Complex, B-2045/B-2087/B-2088 and Ordnance Test timely alterntive is to procure RLCM's and associated span line equipment. Many of the buildings have telecommunications systems which are overloaded (120% of capacity) and increases in work area personnel efficiency is adversely effected by Area. Current cable plant is insufficient to implement the single line phone concept and the most cost efficient and lack of telecommunications circuits.

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_	ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	ZATION PR	XCRUM JUS	TIFICATI	ON SHEET				A. W	BUDGET SUBMISSION	MISSION		
_	<b>Q</b>	(Dollars in Thousands)	Thousands	=					2	FY 1990/1991 PRESIDENT'S	991 PRES	IDENT'S	
										BIENNIAL	,		1
	Industrial Fund/Activity Group/Activity	up/Activil	γ.			ပ် —	C. ACP-1 Line No. & Item Description	ne No.	f Item D	escripti	lon		
	nif/ORDNANCE/WRNSTA Seal Beach	f				<b>-</b>	H042 - Command Communication System	ommend	Communic	ation Sy	/stem		
			FY 1988			FY 1989			FY 1990			FY 1991	
		-	Unit	Unit   Total	-	Unit	Unit   Total		Unit   Total	Total		Unit	Unit   Total
		Quant	Cost	Cost	Quant	Sost	Quant   Cost   Cost   Cost   Cost   Quant   Cost   Total   Quant   Cost   Cost	Quant	Cost	Total	Quant	Set	Cost
_ ;		<b>-</b>				- 6							_
	Equipment - Phase I					7,000	11,000   1,000						
- Equi	Equipment - Phase II 6 III	. <b></b> .			_	_	· <del>-</del> ·		12,000	2,000		16,000	000'9 1 000'91
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The station consist of four sites: Seal Beach, Corons, Fallbrook, and Pomons, and completion of its misssion requires private communications networks. The current communications system is a myriad of equipment ranging in age from seven to fifty years depending on the site. There are frequent failure of the current system due to the age of the equipment.

Transmission is poor with plenty of cross-talk and cross connect. This system will enable the station to integrate voice eccurate and timely transmission of voice and data between the station and other DoD installations, and with public and and data communications.

(Dollars in Th  B. Industrial Fund/Activity Group/Activity  NIF/ORGNANCE/NAVORDSTA Indian Head	(Dollars in Thousands)			_	<b>.</b> _	FY 1990/1991 PRESIDENT'S	91 PRESI	DENT'S	
B. Industrial Fund/Activity Grouning NIF/ORGNUNCE/NAVOROSTA Indian									
8. Industrial Fund/Activity Grouns WIF/ORGNANCE/NAVORDSTA Indian			ı	-		BIENNIAL			
NIF/ORGNANCE/NAVORDSTA Indian	p/Activity		C. ACP-1	ACP-1 Line No. & Item Description	F Item De	soriptic	<b>u</b> o		
	. Bead		но43 -	H043 - Technical Collateral Equip MILCON P 059	1 Collate	eral Equ	tр МI	I NOOT	059
	i FY 1988		FY 1989		FY 1990			FY 1991	
		Total   Cost   Quant	Unit   Total	1_ 1	Unit   Quant   Cost	Total	Quant	Unit	Total
Bquipment		16	1 2,071	1 16		3,499 4			
Installation			- <del>-</del> •		11,545	1,545		- <del>-</del> •	
			<del>-</del>					·	
MK 122 Warhead for the MK 50 torpedo, MK 115 Marhead and MK 125 Warhead for Standard Missile, Malleye I and II. following is a listing of the technical collateral requirements to support this project:	r the MK 50 torpedo, MK 115 Mathead and MK 125 Mathead for Standard Mis. sting of the technical collateral requirements to support this project:	and MK 125 We equirements to	nrhead for St.	andard Mis s project:	Bile, Wa.	Teye I	and 11.		
FY 1989 Items Description	Total Cost	Z	FY 1990 Items Description	)escriptio	c	•	Total Cost	)st	
Temperature Contol System	120	<b>28</b>	Walkie Stackers				75		
Electronic Scale System	85	I	Initiator Casting Stand	ing Stand			65		
	20	2	Fume Removal System	ystem			20		
Casting Bell	375	N	Nitrogen Generator	ator			100		
Integrated Storage & Retrieval	185	δ	Curing Oven				185		
Stacking System	85	H.	Hoist System				100		
Positioning Arm	155	M.	Mixer Support Equipment	Equipment			309		
Security System	8	B	Dust/Fume Removal System	val System	_		165		
IDS-Assembly System I	300								
IDS-Assembly System II	325								
ID8-Mix Building	300								
Mixer, Fire Protection System	100								
Mixer Instrumentation System	250								
Min Can Transcort Vabicle	350								

	32
-NG22	26 of
7-11	Page

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	TION PRO	GRAM JUS	TIFICAT	TON SHEET	l l			A. K	A. BUDGET SUBMISSION	MISSION		
[Do1]	(Dollars in Thousands)	housands	•					E	FY 1990/1991 FRESIDENT'S BITCHIST.	991 PRES	IDENT'S	
B. Industrial Fund/Activity Group/Activity	/Activit	<b> </b>			່ວ 	C. ACP-1 Line No. 6 Item Description	ne No.	i Item I	**************************************	lon		
NIF/ORDNANCE/WENSTA Yorktown					<b></b> -	HO44 - Railcars	eilcars					
		FY 1988			FY 1989			FY 1990			FY 1991	
	_	Unit	Unit   Total		Unit   Total	Total		Umit	Unit   Total		Unit   Total	Total
	Quan.t	Cost	S	Quant   Cost   Cost   Quant   Cost   Quant   Cost   Total   Quant   Cost   Cost	Cost	Cost	Quant	Cost	Total	Quant	Cost	Cost
_	_	_	_	_				1	-	_	-	
Boxcars	_	_	_	_	_	_	10	05 -	200	_	_	
- :										; _ :	- :	
Flatcars										음 	62.5	8
_	_	_	_	_	_	_		_	_	_	_	
			_ `									

Railroad cars over 50 years old must be replaced because they have reached their limit in usage and are restricted from | operation. At the station, a number of railroad flatcars and boxcars will be restricted from operation in 1990 and the | remaining railcars will be restricted by 1995.

FY 1990/1991 PRESIDENT'S   BIRWIAL   BIRWIAL   C. ACP-1 Line No. 6 Item Description   FY 1998   FY 1999   FY 1991     FY 1998   FY 1999   FY 1991     NIF/ORDNANCE	ASSET CAPTIFALIZATION PROGRAM DUSTIFICATION SHEET	2044	MAN SOL	STIFICAL	NOI SHE	ET			ž Ž	A. BODGET SURMISSION	MISSION		
and/Activity Group/	(Dollars	at the	onsanda	ā					_	Y 1990/15	991 PRESID	ENT'S	
C. ACP-1 Line No. 6 Item Description   C. ACP-1 Line No. 6 Item Description   Implement System   Implement System   Implement System   Implement System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System   Implement Information System	Andrew Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comments Comme									BIENNIA			
	B. Industrial Fund/Activity Group/Ac	tivity				ე	ACP-1 L	ine No.	f Item !	Descripti	lon		
	NIF/ORDNANCE						H045 -	Ordnance	Manager	ment Syst	cem (OMS)		
			FY 1986			FY 198	6	_	FY 1990		ia,	FY 1991	
		-	Unit	Total		l that	Total		Unit	Total		Unit   Total	Total
	8 1	Mant	Cost	Cost	Quant	Cost	Cost	Quant	Cost	Total	Quant	Cost	Cost
1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120   1,120	_	_	_		_	_	-	_	_		_	-	
	Management Information System	_	_	1,120	_	_	1 1,120	_	_	1 695	_	-	
	-	_	_		_	_	_	_	_		_	-	
	-	_	_		_	-	_	_	_	_	_	-	
		_	_		_	_	_	_	_	_	_	_	
	_	_	_	_	_	_	_	_	_	_	_	-	
	-	_	_	_	_	_	_	_	_	_	_	_	
		_			_	_	_	_	_		_	_	

The CMS System is a GNO sponsored program to provide ordnance activities with a state-of-the-art automated information system for managing non-nuclear expendable ordnance. OWS is one of the tools necessary to attain and maintain the Non-Nuclear Ammunition Inventory Accuracy Program goals of 99.5% accuracy and 100% visibility by December as directed by CNO.

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	ATION PRO	GRAM JUS	TIFICAL	CON SHEET	_			A. BK	A. BUDGET SUBMISSION	MISSION		
(DO)	(Dollars in Thousands)	housands	=					E 	FY 1990/1991 PRESIDENT'S	91 PRES	IDENT'S	_
									BIENNIAL			
B. Industrial Fund/Activity Group/Activity	p/Activit	^			<u>ပ</u> –	ACP-1 L	Lne No.	f Item [	C. ACP-1 Line No. & Item Description	<b>6</b>		
					_							
NIF/ORDNANCE					<del>-</del> -	H046 -	Industri	al Logis	H046 - Industrial Logistics Support MIS	Port MI	•	
		FY 1988			FY 1989			FY 1990			FY 1991	
	-	Unit   Total	Total		Unit	Unit   Total		Unit	Unit   Total		Unit   Total	Total
	Quant	S	Cost	Quant   Cost   Quant   Cost   Quant   Cost   Total   Quant   Cost   Cost	Soet	Cost	Quant	S S	Total	Quant	S	S
Management Information System			1,480			1,140			918			670
		- <del>-</del>	_	_	_			_	_			
					]					i		

ILSMIS is a management information system developed by headquarters for Ordnance activities usage in Supply functions. It is designed to enhance automated procurement, and improve direct material, inventory and other supply functions. Anticipated results are increases in activity's productivity by providing prompt and efficient supply services to customers on/off the activities.

			•						BIENNIAL	د		
B. Industrial Fund/Activity Group/Activity	up/Activit	÷.			ე 		ACP-1 Line No. & Item Description	f Item	Descript	ton		
HIF/CHUNNICE/NAVORDSTA Louisville	w111.					H047 -	Gun Syst	em Englu	ering	HO47 - Gun System Engineering Support System	System	
	-	FY 1988		_	FY 1989		_	FY 1990		_	FY 1991	
		Grift	Total		onit	Total		Unit	Unit   Total		Unit	Total
	Quent			Quant	Cost		Quant	Cost	Total	Quant	Cost	3
			620			220			155			9
		- <del>-</del>	}		- -	} 			} 			
	_	_									_	
		- 		- <b>-</b>	- -	. <b>_</b>					_	
	-											
Marrative Justification:												
i This system will address all engineering and technical data related to gun weapons systems and equipment. The data will	engineeri	Ing and t	echnica:	1 data z	celated (	to gun w	e suodes	ystems	trube pur	pment.	The date	11174
) be incorporated into a single integrated data base addressing, at a minimum: Configuratio status accounting, ORDAIR   installation management and supply support.	tegrated d	data base	addres	eing, at	a mint	man: S	nfigurat	do stat	ne accou	nting, O	RDALT	
_												

FY 1990/1991 PRESIDENT'S

A, BUDGET SUBMISSION

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET

(Dollars in Thousands)

Page 29 of 32

IF-ACP2

ASSET CAPITY	ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	DOUSEDO	STIFICAT:	ION SHEET				A. BU	BUDGET SUBMISSION FY 1990/1991 PRESIDENT'S	MISSION 91 PREST	DENT'S	
									BIENNIAL			
B. Industrial Fund/Activity Group/Activity	roup/Activit	٠,			ن 	C. ACP-1 Line No. & Item Description	ne No.	I Itom E	)escripti	uo.		
HIF/ORDNANCE						H048 - E	quipsent	1088 0	H048 - Equipment less than \$1M			
		FY 1988			FY 1989	6		FY 1990			FY 1991	
	Quant	Unit   Cost	Unit   Total	Quant	Unit	Unit   Total   Unit   Total   Unit   Total   Unit   Total   Unit   Total   Quant   Cost   C	Quant	Unit	Unit   Total     Cost   Total	Quant	Unit	Unit   Total
Equipment less than \$1M			53,288			32,064		_ <b>_</b>	25,150			1 31,390
	_ <del>_</del>					 						
		_	_	_	_	_		_	_		_	_
	_	_	_		_	_		_	_			_

This is the total of all other equipment authorized in the ACP Program during FY 1988 through FY 1991 which are not I listed individually in the IF Exhibit ACP-1. These types of equipment include Material Handling Equipment, | ADP equipment, Alterations/Modifications/Rehab of major equipment, and other equipment which are replacement and/or productivity enhancement equipment.

ASSET CAPITALIZATION PROGRAM JUST  (Dollars in Thousands)  B. Inchistrial Fund/Activity Group/Activity  NIF/CRCMANCE    FY 1988	IFICATION SHEET   A. BUDGET SUBMISSION   FY 1990/1991 PRESIDENT'S   BIENNIAL	C. ACP-1 Line No. & Item Description	R049 - Management Information Sys less than \$1M	FY 1989   FY 1990   FY 1991	<b> </b>		   
in Thousands)  in Thousands)  in Thousands)  FY 1988      I thit   Total      I thit   Cost   Quant			R049 - Management		1	1,822   1	 
ALIZATION PROGRAM (Dollars in Thousa Group/Activity   FY 1   Uni   Quant   Cos	JUSTIFICATION SHEET nds)				Total	1,490	  
	(Dollars in Thousa	Industrial Fund/Activity Group/Activity		FY 1		<b></b> -	 

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	ATION PR	CERNIM JUS	TIFICAT	TON SHEE	p.		-	A. BE	A. BUDGET SUBMISSION	MISSIM		-
(Pol	(Dollars in Thousands)	Thousands	=					<u>E</u>	1990/1	FY 1990/1991 PRESIDENT'S	DENT'S	_
									BIENNIAL			-
B. Inclustrial Fund/Activity Group/Activity	p/Activi	z <b>y</b>			<u>ပ</u> —	C. ACP-1 Line No. & Item Description	ne No.	Item I	Sescript:	lon	ı	_
HIF/ORDNANCE						H073 - Capitalized Minor Construction	apitali	sed Min	or Consti	ruction		
		FY 1988			FY 1989			FY 1990			FY 1991	
	-	Onit	Unit   Total		Unit	Unit   Total		Unit	Unit   Total		Unit   Total	Total
	Quant	Quant   Cost   Cost   Quant   Cost   Quant   Cost   Total   Quant   Cost   Cost	Cost	Quant	Cost	Cost	Quant	Cost	Total	Quant	Cost	Cost
	_	_		_	_	_	_			_	_	-
Capitalized Minor Construction	_	_	5,933	_	_	6,563	_		699'9	_	_	6,597
	_		_	_	_	_	_		_	_	_	-
				_						_ `	_	_
	_			_						_ `	_	-
	_	_	_	_	_	_	_	_	_	_	_	_
	_	_	_	_	_	_			_	_		_
	1	_								1		-

This item includes all cost involved in constrution less than \$200,000 and is geared towards improxing productivity of the activity or making it more efficient. The requirements are reviewed regularly by NVSEA 6541 to minotor the necessity of the projects and ensure the execution of the program.

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MANY FURLIC WORLS CHAFRES
DEPARTMENT OF THE MANY
MANY INDUSTRIAL FUND
INDUSTRIAL FUND ASSIT CAPITALIZATION PROGRAM
FT 1990/PT 1991 PRESIDENT'S RIEMTAL BUDGET
(Dollars in Millions)

	_	I YY	FY 1988	FY	FY 1989	PY	FY 1990	FY	FY 1991
Line	Item		Total		Total		Total	_	Total
Number	Description	Quant	Cost	Quant	Cost	Quant	Cost	Quent	Cost
1001	Telephone Switch		7.5						
	Total ACP Equipment Costing Over		7.5						
1002	CAD/CAM Equipment						1.8		1.5
1003	Portal Crane (75 TON)	·	5.0						
	Total Modernisation Initiatives		5.0						
1004	Other Equipment Purchases Costing Under \$1M Each		28.5		1 28.7		1 23.9	- <b></b> .	1 25.0
1005	Minor Construction Projects		11.9		6.8	·	7.3		8.4
9001	Other Management Information Systems Costing Under \$1M Each	~					<b>*</b> .		•r;
	Total Program		53.2		37.6		33.8		35.4
				<b>-</b> -					
	~ <b>-</b> -		<b></b>						
								IF EXHIBIT ACP-1	IT ACP-1
			110					* **	

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ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	ATTON PRO	GRAM JUS	FIFICAL	TON SHEE	Ę.			A. B.	A. BUDGET SUBMISSION	MISSION		
( Do 1	(Dollars in Thousands)	housand!	<u>.</u>					_	FY 1990/1991 PRESIDENT'S	191 PRES	IDENT'S	
									BIEMNIAL	.,		
B. Industrial Fund/Activity Group/Activity	IP/Activit	<b>.</b>			-	ACP-1 L.	ine No.	& Item !	C. ACP-1 Line No. & Item Description	ion		
MIP/Public Works Centers					- <b>-</b> -	1002 - 0	ID02 - CAD/CAM Equipment	Equipser	<b>,</b>			
		FY 1988			FY 1989			FY 1990			FY 1991	
	-	Unit	Unit   Total		Unit	Unit   Total		Unit   Total	Total		Unit   Total	Total
ELEMENTS OF COST	Quent	Cost	Cost	Quent	Cost	Cost	Quant	Cost	Quant   Cost   Cost   Quant   Cost   Cost   Cost   Total   Quant   Cost   Cost	Quant	Cost	Cost
	-	_			_		_	_	_		_	
End item	_	_	_	_	_	_	_	_	1,800	_	- -	1,500
										_		
					- <del>-</del>	- <del>-</del>			- <b>-</b>			
	_	_	_		_	_	_	_	_	_	-	
	_	_	_		_	_			_		_	
					1	1						

Planned procurements represent both phased supplements to existing Graphic Engineering Mapping System (GEMS) systems and having the CAD/CAM equipment include the ability to level out peaks and valleys in personnel needs, completing portions of new GEMS systems at the PWCs. The computer-aided design and drafting (CADD) system increases productivity by producing a quality control, and improving the availability of information on the status of the project budget. Other advantages to more thorough engineering analysis, job specific specifications with more design alternatives for customers, improving work more promptly and establishing standard procedures to aid in work completion.

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	IZATION PRO	GRAM JUS	TIFICAT	TON SHEET	٠.			A. BI	A. BUDGET SUBMISSION	BMISSION		
1)	(Dollars in Thousands)	housands	2					E	R 1990/19	FY 1990/1991 PRESIDENT'S BIEMWIAL	IDENT'S	
B. Industrial fund/Activity Group/Activity	oup/Activit	<b>5</b> 1				C. ACP-1 Line No. & Item Description	ine No.	f Item	Descript	ion		
WIF/Public Works Centers						1004 - 0	other Equip SlM Each	uipment ch	Purchas	IOO4 - Other Equipment Purchases Costing Under SIM Each	epan ba	
		FY 1988			F7 1989			FY 1990			FY 1991	
	_	Unit   Total	Total		Unit	Unit   Total		Unit	Unit   Total		Unit	Unit   Total
ELEMENTS OF COST	Quant	Cost	Cost	Quant   Cost   Cost   Quant   Cost   Cost   Quant   Cost   Total   Quant   Cost   Cost	Cost	Cost	Quant	Cost	Total	Quant	Cost	Cost
	_	_			_	_	_	_	_	_	_	_
End item	_	_		_	_	28,736	_	_	123,968	_	_	24,985
	-	_			_		_	_	_	_	_	_
	-		_		_	_	_	_	_	_	_	_
	_	_		_	_		_	_	_	_	_	_
	_	_			_		_		_	_	_	_
	_	_		_	_	_	_	_	_	_		_
	_	_										

maintenance costs, reduced downtime of vehicles, increased fleet availability, improved reliability and customer satisfaction. equipment purchases consist of microfilm and microfiche equipment, automated filing equipment, copiers, etc., which represent retrieval in Comptroller and Material Departments, increase productivity by automating time consuming/redundant tasks through plant/shop equipment automated data processing equipment, office automation equipment, and administrative equipment required increase productivity over existing equipment. Planned ADP/OA equipment buys will provide improvements to existing hardware inter-connection and integration of terminals/printers and additional telecommunications capability. Planned administrative craviers, loader scoops, electric welders, sweepers, crane trucks, and crane cruisers are acquired in order to update aging inventory because it exceeds life expectancy requirements, existing equipment inventory is beyond economical repair and to systems that interface micros to minicomputers, aid in the implementation of new systems to improve document retention and The reasons for procurements of material handling equipment and industrial plant/shop equipment are to replace existing for mission accomplishment at eight Public Works Centers. CESE buys items such as trucks, trailers, compressors, crane Anticipated procurements of Civil Engineering Support Equipment (CESE), material handling equipment, industrial vehicle fleets and replace antiquated equipment. Timely replacement of aging equipment affords the centers minimum cost effective, labor saving devices that enhance productivity.

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	TION PRO	DGRAM JU	STIFICAT	ION SHEE		ļ		A. BU	A. BUDGET SUBMISSION	MISSION		
(1001)	(Dollars in Thousands)	housand	ŝ					-	FY 1990/1991 PRESIDENT'S	91 PRES	IDENT'S	
									BIENNIAL			
B. Industrial Fund/Activity Group/Activity	/Activit	. <del>.</del>			<u>.</u>	C. ACP-1 Line No. & Item Description	ne No.	E Item D	escripti	g o		
MIF/Public Works Centers						I - S00I	inor Coi	ıstructi	1005 - Minor Construction Projects	ot s		
		FY 1988			FY 1989			FY 1990			FY 1991	
	_	Unit	Unit   Total		Unit	Unit   Total		Unit	Unit   Total	į	Vait	Unit   Total
ELEMENTS OF COST	Quant	Cost	Cost	Quant	Cost	Quant   Cost   Cost   Quant   Cost   Cost   Quant   Cost   Total   Quant   Cost   Cost	Quant	Cost	Total	Quant	Cost	Cost
	ı	_	_	_	 	_		_				
Completed Projects	_	_	_	_	_	8,902		_	1,275		_	8,369
	_	_	_	_	_	_		_				
	_	_		_	_	_		_	_		_	_
	_		_	_	_	_		_	_			_
	_	_	_	_	_	_		_	_		_	_
	_	_	_	_	_	_		_				
	_	_	_	_		_		1			-	

industrial shop stores; installing capacitors to improve electrical transmission; constructing loading docks; replacing PCB To provide funding for maintenance of the plant property of the eight (08) Public Works Centers located at Horfolk, transformers; installing sprinkler systems; enlarging storage areas for specified buildings and repairing parking lots. distribution lines such as steam, electric, water for PWC owned and managed utility systems; improvement projects for Virginia; Pensacola, Florida; Great Lakes, Illinois; San Diego, California; San Francisco Bay (Oskland), California; Pearl Harbor, Hawaii; Guam, M. I. and Subic Bay, R. P. For example, utility repair projects to improve utilities

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	TION PRO	GRAM JU	STIFICAT	ION SHEE				A. BU	A. BUDGET SUBMISSION	MISSION		
[100]	(Dollars in Thousands)	housand	î					£	FY 1990/1991 PRESIDENT'S	91 PRES	DENT'S	
									BIENNIAL			
B. Industrial Fund/Activity Group/Activity	/Activit	<b>X</b>				C. ACP-1 Line No. & Item Description	ine No.	. Item D	•scripti	uo		
					_							
MIF/Public Works Centers						9001	Other Mai	her Management	1006 - Other Management Information Systems Costing	tion Sys	stems C	sting
	_	FY 1986		_	FY 1989			FY 1990			FY 1991	
		1 5	Unit   Cotal		T ti	Unit   Total	]_	1101	Unit   Wotel		1	Unit   Total
ELEMENTS OF COST	Quant	Cost	Cost	Quant   Cost   Cost   Cost   Cost   Quant   Cost   Total   Quant   Cost   Cost	Cost	Cost	Quant	Cost	Total	Quant	Cost	Cost
	_					_	_	_			_	
End item	_		_	_	_	_	_	_	800		_	200
	_	_		_		_	_	_	_		_	
		_	_	_	_	_	_	_	_		_	
	_	_	_		_	_	_	_	_		_	

batch system currently in the Public Works Center Management Information System and produce an on-line relational interactive Planned software developments are for NAVFAC Code 161 task to investigate the data base management system to modify the include enhancing and implementing at other public works centers the ideas piloted and implemented at PWC Pensacola for bar data base system. The proposal is being prepared presently for presentation to the PMC Business Managers. Addition tasks coding information in the Material Department and to implement a facilities support contract system expanded to include construction contracts based upon the contracts system developed by SOUTHMAVFACEMGCOM.

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MASSET CAPITALITATION PROGRAM
FT 1990/1991 PRESIDENT'S RIENWIAL BUDGET
(Dollers in Millions) MAYAL RESEARCE LABORATORY DEPARTMENT OF THE MAY

_		FY 1	FY 1988	FY :	FY 1989	FY	FY 1990	FY	FY 1991	_
Line	Item		Total		Total		Total	i _	Total	_
Number	Description	Quant	Cost	Quant   Cost	Cost	Quent	Cost	Quant	Cost	
		]_								
1001	YAG Laser					<b>-</b>	1.6			
1002	Multilays Facility						1.2			
1 3003	Rutherford Backscattering Facility					<b>-</b>			1:1	
1004	Compact Range/Anechoic Chamber					- <b></b> -			1.0	
	Total Equipment Over \$1M   (Category A)					~	2.8	~	2.1	
1 3005	CAD Work Station	~	m;			·				
	Total CAD/CAM Equipment   (Category D)	<b>-</b>	m. 				- <b>-</b>			
1 3006	Archiving System				2.0					
7007	Central Computer Facility Front   End Computer				~ <del>-</del>			- 	s,	
1 3008	Cray Memory Upgrade						7.0			
6000 1	Mini-Super Computer					<b>.</b>	•. 	- <b>-</b> -	. <b>.</b> .	
1 3010	VAX Computer				۳. - <del>-</del> -					
1 3011	VAX Cluster CPU						m. - <del>-</del> -			
				125				FEXHIBIT ACI	IF EXHIBIT ACP-1 Page 1 of 2	-

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MAYAL RESEARCE LABORATORY
DEPARTMENT OF THE MAY
MAY INDUSTRIAL FUND
ASST CAPTALISATION PROGRAM
FY 1990/1991 PRESIDENT'S BIRMHAL SUDGET
(Dollers in Millions)

	_	FY	FY 1988	FY	FY 1989	FY	FY 1990	FY	FY 1991
Lin.	Item	_	Total	_	Total		Total	_	Total
Musber	Description	Quant	Cost	Quant	Cost	Quant	Cost	Quant	Cost
3012	Parallel Processing Computer	·			l		e:		
3013	Multiple Parallel Processor				<b>-</b>			- 	3.2
	Total Major ADP Equipment   System (Category E)	<del>-</del>		, 	2.8	<b>.</b>	1 2.2	- 	  -   3.7
J014	   Other Equipment Less Than \$1M		1 12.9		8.6		4.7		
	Total Maval Research Laboratory		14.2	m 	13.2	•	11.5		11.8
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IF EXHIBIT ACP-1 Page 2 of 2

ASSET (AFIGHIZATION FROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	(Dollars in Thousands)	DGRAM JI Thousand	JSTIFICAT 1s)	ION SHEE	<del>t</del>				A. BUDGET SUBMISSION FY 1990/1991 PRESIDENT'S	BMISSION 991 PRES	edent's	ı
B. Industrial Fund/Activity Group/Activity	oup/Activi	ty.			ن ا	ACP-1 Li	Ine No.	r item	C. ACP-1 Line No. & Item Description	ion		
MIF/Maval Research Laboratory/HRL	ry/WRL					J001 - Yag Laser	fag Lase	ų				
		FY 1988	88		FY 1989	6		FY 1990			FY 1991	
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conducting a survey of research personnel throughout the lab. It was determined that this system would support the type of fabrication technology needed by the research divisions and would satisfy the immediate needs for laser welding, cutting, hole drilling, clodding, tear treating of various materials including thick metals, PC boards, composites, cloth, etc. This research oriented tool is to be used in developmental work for laser applications. NRL's Advanced Materials Fabrication and Technology Steering Committee selected this laser processing system after

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	CATION PRO	GRAM JUS	STIFICAT	ION SHEE	F			A. Bu	A. BUDGET SUBMISSION	MISSION		
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B. Industrial Fund/Activity Group/Activity	oup/Act.vit	<b>.</b>			<u>ს</u> —	C. ACP-1 Line No. & Item Description	ine No.	E Item E	•script:	uoı		
HIF/Maval Research Laboratory/WRL	cy/WRL					J002 - 1	fultílay	J002 - Multilayer Facility	ity			
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components and operate at high frequencies, a multilayer printed circuit is required. This system is being processed because of the research requirements at the lab, the major overhaul expenses required to keep the present system functioning and the time and expense associated with contracting-out the requirements to produce multilayer printed circuit boards. The time The current printed circuit shop is producing two-sided printed circuit boards of barely acceptable quality and will not lost in waiting for the boards to be menufactured and the restrictions placed on the artwork by the manufacturer create produce the circuits designed and required by the research community at the lab. Because these circuits contain more additional problems for the research community at the lab. IF-ACP2 Page 2 of 15

B. Industrial Fund/Activity Group/Activity   C. ACP-1 Line No. & Item Description   MIF/Mavel Research Laboratory/WRL	ASSET CAPITALISATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	ALIERTION PROGRAM JUST (Dollers in Thousands)	GRAM JU	STIFICAT)	ION SHEET				A. Bu	A. BUDGET SUBMISSION FY 1990/1991 PRESIDENT'S BIENNIAL	MISSION 191 PRESI	IDENT'S	
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TIEMENTS OF COST	MIP/Maval Research Laborato	ry/WRL				. – –	3003 - #	lutherfo	rd Backs	scatteria	ng Facil	ity	
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for research on non beam surface interactions. This facility will be designed for and dedicated to analysis required by the techniques such as Auger sputter depth profiling and SIMS, this facility will provide nondestructive measurements. Surface composition/structure is mandatory for a viable RtD program. Present capability relies on access to an instrument designed modifications and thin films are crucial preces of modern material science/technology. The ability to analyze their Nuclear approaches are an essential component to thin film composition/structure analysis. In contrast to other MRL Materials programs.

C. ACP-1 Line No. & Item Description   JO04 - Compact Range/Anechoic Chamber   J004 - Compact Range/Anechoic Chamber   J004 - Compact Range/Anechoic Chamber   J004 - Compact Range/Anechoic Chamber   FY 1988   FY 1989   FY 1990     Unit   Total   Unit   Total   Unit   Total   Quant     Cost   Cost   Quant   Cost   Total   Quant	ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	ILATION PRO	GRAM JUS	STIFICAT	TON SHEET	•			A. BI	A. BUDGET SUBMISSION	MISSION		
C. ACP-1 Line No. & Item Description   C. ACP-1 Line No. & Item Description   J004 - Compact Range/Anechoic Chamber   FY 1988   FY 1990	ש	ollars in T	porsand	<u>-</u>					E	r 1990/19	991 PRES	IDENT'S	
Haval Research Laboratory/H	B. Industrial Fund/Activity Gr	oup/Activit	A			j -	ACP-1 L	ne No.	f. Item	Descript	u o		
	MIF/Maval Research Laborato	ry/MRL					J004 - 0	Ompact	Range/A	nechoic (	Chamber		
SIEMENTS OF COST   Quant   Cost   Quant   Cost   Quant   Cost   Quant   Cost   Quant   Cost   Quant   Cost   Quant   Cost   Quant   Cost   Quant   Cost   Total   Quant   Cost   Cost   Total   Quant   Cost   Total   Cost   Total   Quant   Cost   Cost   Total   Cost   Cost   Total   Cost		FY 1986			FY 1989			FY 199(			FY 1991		
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current technology required by many research programs involved with the design, development, evaluation and fabrication of radio frequency antennas for spacecraft and associated ground station systems. This system will provide the capability to operate in the higher frequency ranges, which is required by new state-of-the-art space systems antennas and will provide This facility will serve a large cross section of research users at NRL and will enable NRL to keep abreast of the test zone dimensions necessary to evaluate space systems of approximately shuttle bay dimensions.

The current large tapered horn anechoic chamber and associated electronic equipment is over thirty years old, some of which is no longer maintainable and is limited by absorber design and configurations to frequencies of less than 18GHz.

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NIF/Naval Research Laboratory/NRL	MRL					J005 - 0	J005 - CAD Workstations	stations				
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capability for handling complex patterns that represent or visualize information for integrated circuit design and analysis. The workstation to be acquired in FY 1991, is critical to the overall success of projects involving curcuit design and analysis, more specifically the VMSIC and MIMIC projects. These projects could be negatively impacted by the nonavailability of the capabilities provided by this superworkstation. This equipment provides a high resolution

A high degree of sophistication is required in order to display multilevel design, combine features from VHSIC and HIMIC projects, and add proximity corrections to processes. Page 5 of 15

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ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	ALIZATION PROGRAM JUST (Dollars in Thousands)	GRAM JUS	FIFICAT:	TON SHEE	l H:			A. Bt	BUDGET SUBMISSION FY 1990/1991 PRESIDENT'S	MISSION 991 PRES	IDENT'S	
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B. Industrial Fund/Activity Group/Activity	/Activit	>-			-	C. ACP-1 Line No. & Item Description	ine No.	f Item I	escripti	uoı		
MIF/Maval Research Laboratory/WRL	WRL					3006 - 1	J006 - Archiving Systems	g System	2			
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new archiving system is necessary to provide all NRL computer network users with efficient file storage which automatically archiving system is not available to many CCF users because it cannot be fully integrated into the computer facility. A moves files between access levels based on frequency of use. Those files required most often will be kept on disk while applications (such as structural and thermodynamic analyses) are being run. Many NRL research efforts will benefit from those used only on occasion will be kept on less expensive tape systems. Besides cost efficiency benefits, the new file better file accessibility and reduced run times while the procurement of expensive additional disk storage will be kept archiving system will eliminate the need to migrate many users files off the Cray computer's disk storage when large NRL's Central Computer Facility (CCF) utilizes a file archiving system to support research efforts. The current to the minimum. level required. IF-ACP2 Page 6 of 15

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	TION PRO	GRAM JU	STIFICAT	ION SHEE	į.			A. B	BUDGET SUBMISSION	MISSION		
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B. Industrial Fund/Activity Group/Activity	/Activit	<b>&gt;</b>			ن -	C. ACP-1 Line No. & Item Description	ine Mo.	L Item !	**************************************	uo		
NIF/Naval Research Laboratory/NRL	WRL				<b></b> ·	J007 - 0	Central (	Computer	J007 - Central Computer Facility Front End Computer	y Front	End Co	iputer
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provide access to the Cray. Usage of the front ends has expanded to include numerous software packages and data base systems are saturated much of the time and response time to the user has become intolerable. No amount of fine tuning can alleviate requiring additional CPU resources. Internal studies as well as evaluations by the vendor have revealed that the computers The original front and specifications provided for limited computational resources. The computers were specified to the problem. Front end CPU upgrades are necessary if the CCF is to continue to provide acceptable service to increasing numbers of users.

This computer will supplement rather than replace existing computers.

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HIP/Maval Research Laboratory/HRL	/MRL				3008 - 0	ray Mem	J008 - Cray Memory Upgrade	rade			
		FY 1988		FY 1989			PY 1990			FY 1991	
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Marrative Justification:											
The current Cray computer has 4 million words of memory. An additional 4 million words is required to accommodate the   scientific calculations that require larger matrices of data.	4 million v	ords of mem	ory. An e data.	kddi tion	al 4 mil	lion wo	rds is 1	required	to acco	mmodate	th•
This upgrade will supplement rather than replace existing memory.	rather than	replace exi	sting memo	ry.							

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ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	ALIZATION PROGRAM JUST (Dollars in Thousands)	GRAM JUS	TIFICATI	TON SHEET	<b>5</b> 4		<del>_</del>	# F	A. BUDGET SUBMISSION FY 1990/1991 PRES BIENNIAL	BUDGET SUBMISSION FY 1990/1991 PRESIDENT'S BIERHIAL	IDENT'S	
B. Industrial Pund/Activity Group/Activity	up/Activit			} 	ن ا –	ACP-1 1.1	ne No.	£ Item	C. ACP-1 Line No. & Item Description	ion		
MIF/Maval Research Laboratory/WRL	y/WRL					ž - 600£	J009 - Mini-Super Computer	er Comp	ut e r			
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A CCF mini-super computer will provide a high performance Unix environment on a super computer like architecture. It will also provide superior tools for code and algorithm development for problems destined for the Cray. With a mini-super, a high speed link to the Cray is possible thus allowing the mini-super to be more useful for graphic applications than the current front end computational capability.

This equipment will supplement rather than replace existing computers.

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B. Industrial Pund/Activity Group/Activity	up/Activity				; -	C. ACP-1 Line No. E Item Description	ne No.	E Item I	Secript:	uoı		
MIP/Haval Research Laboratory/MRL	1/MBL					J010 - Vax Computer	ах Сошр	uter				
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with other systems currently operating at the Laboratory. Timesharing is currently being used to satisfy requirements, but equipment will provide more timely generation of contractual documents, will accommodate increased workload and additional other requirements of the Laboratory will eliminate this short term solution. The procurement and installation of this The Contracts Division is responsible for the generation and administration of all major R&D Service Contracts'. This computer has a larger capacity to handle an increasing number of functional users (Contract Division Personnel) a larger data base, spreadsheets, interactive queries by Laboratory personnel and the potential to interact functional users.

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B. Industrial Fund/Activity Group/Activity	p/Activity					C. ACP-1 Line No. & Item Description	ne No.	f Item 1	Descript:	uoı		
NIF/Waval Research Laboratory/WRL	MRL					J011 - 4	J011 - Vax Cluster CPU	ter CPU				
		FY 1988			FY 1989			FY 1990			FY 1991	
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The Space Science Division is planning this procurement since it will increase the capabilities of the divisions central computer facility. The current facility supports both scientific and administrative data processing. This equipment will allow the facility to provide a gateway to other computers and to act as a file server for data analysis on NRL computers like the Cray and the Connection Machine. With the acquisition of this system, the division can expect 6 to 20 times the current performance with an even lower operating cost.

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. Industrial Fund/Activity Group/Activity	/Activit	>-			<u>.</u>	ACP-1 L	ne No.	. Item	C. ACP-1 Line No. & Item Description	E0.		
HIF/Mavel Research Laboratory/WRL	MRL					J012 - 1	Parallel	Process	J012 - Parallel Processing Computer	outer		
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fashion or to adapt the entire process as the environment changes rapidly. The parallel processing computer would be used presence of larger clutter returns. The required speed of the process has demanded the use of dedicated hardware to do a very specific task. In some environments, it is desirable to change some of the parameters of the process in an adaptive New algorithms have been developed recently for dealing with the problem of detection of small target signals in the time processor for a radar utilizing these modern algorithms, allowing dynamic reconfiguration of the process; since it as the real would not require hardware changes, but merely a redirection of the process flow or a change in parameters of the process, all under real time software control.

In admition, as a development tool, the software implementation of the algorithms would provide a basis for quickly evaluating new techniques as they are developed.

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C. ACP-1 Line No. & Item   July   J	ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	ALIZATION PROGRAM JUST (Dollars in Thousands)	GRAM JU	STIFICAT 8)	ION SHEE	ŧ.				A. BUDGET SUBMISSION FY 1990/1991 PRESIDENT'S	BMISSION 991 PRES	I IDENT'S	
C. ACP-1 Line Mo. & Item Description   J013 - Multiple Parallel Processor   J013 - Multiple Parallel Processor   PY 1988   PY 1990   PY 1990									_	BIEMMIA	د.		
J013 - Multiple Parallel Processor	. Industrial Fund/Activity G	oup/Activit	<b>*</b>			ن 	ACP-1 L	ine Mo.	& Item	Descript	ion		
FY 1988   FY 1989   FY 1990	MIF/Maval Research Laborato	ry/KRL					3013 - 1	fultiple	Parallo	al Proces	2089		
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allowing more types of scientific applications access. Since this investment would establish massive parallel processing as scientific problems such as fluid dynamics, plasma physics, signal processing, laser propagation, and ionospheric modeling. increasing the speed, efficiency, and quality of applicable research. This would also improve productivity of the Cray by multiple parallel processing center would allow these special scientific problems access to the Cray Super Computer, thus culmination of this research will be a massive parallel processing center consisting of roughly 55,000 processors. The a service within NRL's Research Computation Center, many more NRL scientists, as well as other agencies in the research Multiple parallel processing is required to allow access to an adequate CPU for computation of these unique scientific Currently, NRL scientists are conducting advance research into new, more efficient methods of processing special problems. These experiments are now being done on a relatively small scale (16,000 processor connection box). The community, would be able to use the facility on a cost-reimbursable basis.

This investment would replace the current experimental processing facility.

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			STIFICAT	ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET				- Y. B	A. BUDGET SUBMISSION	BMISSION		
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B. Industrial Fund/Activity Group/Activity	up/Activit				ن 	C. ACP-1 Line No. 6 Item Description	ine No.	f Item	Descript	uoı		
MIF/Waval Research Laboratory/HRL	y/ser					J014 - G	other Eq	uipment	J014 - Other Equipment Less Than \$1M	nn \$1M		
		FY 1988			FY 1989			FY 1990			FY 1991	
ELEMBERS OF COST	Ouent	Cost	Unit   Total	Unit   Total   Unit   Total   Ouant   Cost   Unit	Unit   Total	Outnt	Unit	Unit   Total   Unit   Total	1	Unit   Total	Total	
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maintain its capital investment program. Use of inadequate equipment would result in higher costs, time delays and limit the Laboratory's ability to deal with advanced technology problems and taskings. To avoid this impact, NRL invests in equipment, The Mayal Research Laboratory is a highly and sophisticated research center requiring the state-of-the-art technology to setisfactorily accomplish its mission. Research and development timetables and rapid equipment obsolescence require NRL to instruments and labor saving devices in order to improve employee productivity, enhance the quality of research and control display, (11) Hamanatsu Temporal Analyzer, (12) DNA Synthesizer, (13) items to equip the pulse power facility in support of available laser system, (8) optical disk data storage system, (9) advanced minicomputer, (10) 3-D sensor and physical data costs. Examples of items to be purchases are: (1) electron energy-loss transmission electron microscope with cryostage, (2) X-ray photoelectron spectroscopy system, (3) oscilloscope and related data acquisition instrumentation, (4) secondary ion microsnalyzer, (5) controlled waveform digitizer, (6) high resolution scanning multiprobe facility, (7) commercially national nuclear effects simulation programs, and (14) items to equip the Coordinated Electronic Warfare Simulation Laboratory (MILCON project to open in mid FY 1989).

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	LATION PROC	PRAM JUS	STIFICAL	TON SHEE				A. BI	A. BUDGET SUBMISSION	MISSIM		
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									BIENNIAL	.,		
B. Industrial Fund/Activity Group/Activity	up/Activity				<del>-</del>	C. ACP-1 Line No. & Item Description	ne No.	k Item	Descript	noi		
NIF/Naval Research Laboratory/NRL	/WRL					J015 - Minor Construction	linor Col	nstructi	uoı			
		FY 1988			FY 1989			FY 1990		 	FY 1991	
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ELEMENTS OF COST	Quant	Cost	Cost	Quant	Cost	Quant   Cost   Quant   Cost   Cost   Quant   Cost   Total   Quant   Cost   Cost	Quant	Cost	Total	Quant	Cost	Cost
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NRL's aging physical plant requires renovations to continue to provide a modern facility capable of supporting high level defense research structure (also related to ship survivability), (3) facility for classified Krypton/fluorine laser research, research. In addition, some areas of research create unique requirements that existing facilities cannot meet. Examples of planned minor construction items are: (1) fire research facility for ongoing program in ship survivability, (2) chemical (4) installation of an AFFF separator required for compliance with environmental regulations, (5) construction of office space, (6) various rehabilitation and safety improvement projects, (7) hydraulic laboratory, and (8) fire test deck. DEPARTMENT OF THE NAVY
NAVY INDUSTRIAL FUND
ASSET CAPITALIZATION PROGRAM
FY 1990/1991 PRESIDENT'S BIENNIAL BUDGET
(DOLLARS IN MILLIONS)

ACTIVITY GROUP: NAVAL SHIPYARDS ACTIVITY: ALL NAVAL SHIPYARDS

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: K004	:DIESEL GEMERATOR, 1500KW	<del>-</del>		7.0	••	••			••			••		**
: K005	BEDWAY DOVETAIL GRINDER	-		9.0	••			••	••		••	••		••
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: K013	:OPTICAL COMPARATOR	-		0.1					••		••	••		••
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: K015	:ALTS/MOD/REHAB			4.7				••	••			••		••
: K016	: AIR COMPRESSOR				<del>-</del>		0.2		••			••		••
: K017	CNC MACH CMTR				<del>-</del>		0.2		••			••		••
	PAGE 1 OF 8 PAGES	:			:	:			: "					: "

DEPARTMENT OF THE NAVY
NAVY INDUSTRIAL FUND
ASSET CAPITALIZATION PROGRAM
FY 1990/1991 PRESIDENT'S BIENNIAL BUDGET
(DOLLARS IN MILLIONS)

ACTIVITY GROUP: NAVAL SHIPYARDS ACTIVITY: ALL NAVAL SHIPYARDS

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CMC TOOL GRINDER   CMC TOOL GRINDER   CMC PUNCH	5	HULL BLASTER, CLOSED CYCLE (AUTO)				••	••		••	~		1.3		••	
SENDING ROLL  PLASMA/OXYGEN CUTTING SYSTEM  MILLING CTR, CMC, DOUBLE COLUNN  SUBTOTAL MODERNIZATION INITIATIVES: 8.4 3.8 6.2  BLITTLES. CAPACITIES  RC STAGING HOUSE/MAIN COOL PUMP 2 0.2  MOCK-UP, PUMP TRAINING, 1/4 HULL 1 0.3  MOCK-UP, SMIELDING TRAINING 1/4 HULL 1 0.2	•	CNC TOOL GRINDER							••					••	0.2
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SUBTOTAL MODERNIZATION INITIATIVES: 8.4   3.8   6.2		••					•							••	
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ASSET CAPITALIZATION PROGRAM FY 1990/1991 PRESIDENT'S BIENNIAL BUDGET (DOLLARS IN MILLIONS) DEPARTMENT OF THE NAVY NAVY INDUSTRIAL FUND

ACTIVITY GROUP: NAVAL SHIPYARDS

ACTIVITY: ALL NAVAL SHIPYARDS

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: K035	: TEMP REACTOR WATER COOLING	m 	••	0.5		••			••		••		••	••
: K036	:LOAD BOXES, 2000KW	4	••	0.5					••		••			••
: K037	COLLATERAL EQUIPMENT, MCON	<del>.</del>		2.7					_	1.5	••		••	••
	: P620					••		••	••		•		••	••
: K038	:PIPED-IN GRIT SANDBLAST	-		9.0	••				••		••		••	••
: K039	:FTIR ANALYZER	-		0.1					•		•		••	••
: K040	:ELECT DISCH MACH CNC	<del>-</del>	••	0.3		••		••	••		•		••	••
: K041	ENATER JET CUTTING SYSTEM	. 5		0.5				••	••		•		••	••
: K042	CENT-TURNING MACH CNC	-		0.2		••			••		••			••
: K043	PRESS BRAKE 300 TOK	<del>-</del>	••	0.3	••	••		••	••		••	•	••	••
* K044	:MACHINING CIR CNC	-		0.2				••	••		••			••
: K045	BILGE TK CHEM CLEANING SYSTEM	-		0.3				••	•					••
: K046	SEA MULES	. 5		7.0				••	-		••		••	••
: K047	: BABBITTING	-		0.3				••	•		•		••	••
: K048	:VACUUM GRIT REMOVAL	<del>-</del>		7.0		••		••	•		••			••
: K049	HAZARD MATERIAL STORAGE	<del>-</del>		0.5				••	••					••
: K050	TRAILER MOUNTED WHEELERS	<del>-</del>		7.0					••					••
: K051	:HORIZONTAL BORING MILLS	<del>-</del>		2.0				••	••		••			••
: K052	:BOILER, BARGE MOUNTED	<del>-</del>		5.5				••	•		••		••	••
: K053	TRAILER, PURE WATER 5000 GAL.	-		0.2							•			••
: K054	:FLOATATION DEV (DMP)	. 2		5.1				••			••			••
: K055	PROP SHAFT HANDLING TABLE	<del>-</del>		0.3					•				••	••
: K056	:MCP MOCK-UP	<del>-</del>		0.2					•		••			••
: K057	HULL ACCESS ENCLOSURE	<del>-</del>		0.3					••		••			••
	PAGE 3 OF 8 PAGES				:	:					:			; "

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# DEPARTMENT OF THE MAVY NAVY INDUSTRIAL FUND ASSET CAPITALIZATION PROGRAM FY 1990/1991 PRESIDENT'S BIENNIAL BUDGET (DOLLARS IN MILLIONS)

ACTIVITY GROUP: NAVAL SHIPYARDS ACTIVITY: ALL NAVAL SHIPYARDS

••			FY 1	FY 1988		FY 1989	989	••	<b>1</b>	FY 1990	••		FY 1991
			••					••			••	••	
	ITEM DESCRIPTION	: Q T Y .	. 10	: TOTAL COST:	: QTY.	. 10	: TOTAL COST	: 017.		TOTAL COST	••	01Y. :	TOTAL COST
		:	:		: : : : :	: :	•	: : :	:	: : :			
• ••			••						••		••	•	
			••						••		••	••	
	SHON-NUC SUPPORT SYS	4		0.5					••		••	••	
	:DD4 SVC PLATFORM	- :		0.2					••		••	••	
	SPECIAL TOOLING DMP	٠.	••	0.3					••		••	••	
	SWIELDING MOCK-UP	-		0.2	**				••		••	••	
: K062 : IN-D	:IN-DOCK PLATFORM	<b>ب</b>		7.0	••				••		••	••	
	:MUC HVAC, DMP	-		0.3	••			••	••		••	••	
: K064 :NYDR	:NYDROVAC, NUC	-	••	0.3	••			••			••	••	
: K065 :CMC	CAC MACHINING CENTER, DOUBLE COL	- :		2.5				••	••		••	••	
	CUTTING MACHINE, CANAPY SEAL	~:		0.2					••		••	••	
: K067 :RC A	RC ACCESS HOUSE/MAIN COOL PUNP	~:		0.5					••		••	••	
: K068 : DMP	:DMP SUPPORT	-		17.5				••	••		••	••	
: K069 :PITC	: PITCHOMETEX	<del>-</del> ::	••	0.5	-		0.5	••	••		••	••	
: KO70 :REAC	REACTOR PLANT COOLDOWN SYSTEM	-	••	0.3	-	••	0.3		••		••	••	
: K071 : PUMP	PUMP/VALUE TEST FACILITY UPGRADE	-		1.5	-		1.3		••		••	••	
: K072 : BUOY	BUOYANCY TANKS FOR SSN-688 CLASS	••			4		7.0	••	••		••	••	
: K073 :TURN	TURKING CENTER 54" CC	••			. 2		7.0		••		••	••	
: K074 :RING	:RING ROLLING MACH	••			- :		8.0	••	••		••	••	
: K075 :6" 8	:6" BORING BARS	••			-		0.5	••	••		••	••	
: K076 : BOR1	BORING MACHINE, PORTABLE				- :		0.5		••		••	••	
: K077 :TEMP	TEMPERING FURNACE	••					0.3	••	••		••	••	
: K078 : REMO	REMOTE WORK STATION				-		7.0	••	••		••	••	
	:NUC HVAC				. 2		0.3		••		••	••	
: K080 :LOCA	.LOCAL CALIBRATION STANDARDS				-		0.1	••	••		••	••	
	PAGE 4 OF 8 PAGES		: :		:				: :		!	:	1

DEPARTMENT OF THE MAVY
MAVY INDUSTRIAL FUND
ASSET CAPITALIZATION PROGRAM
FY 1990/1991 PRESIDENT'S BIENNIAL BUDGET
(DOLLARS IN MILLIONS)

ACTIVITY GROUP: ALL MAVAL SHIPYARDS ACTIVITY: ALL MAVAL SHIPYARDS

0M STSTEMS  MG MACH  MG MACH  MG MACH  MG MACH  MG MACH  MG MG MG  MG MG MG  MG MG MG  MG MG MG  MG MG MG  MG MG MG  MG MG MG  MG MG MG  MG MG MG  MG MG MG  MG MG MG  MG MG MG  MG MG MG  MG MG MG  MG MG MG  MG MG MG  MG MG MG  MG MG MG  MG MG MG  MG MG MG MG  MG MG MG  MG MG MG  MG MG MG  MG MG MG  MG MG MG  MG MG MG  MG MG MG  MG MG MG  MG MG MG  MG MG MG  MG MG MG  MG MG  MG MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG  MG MG				-		•	-	1001			•		•			
THEN DESCRIPTION	LINE		, , , ,	:	· · · ·	· · · · ·		•				•	· ··			:
MACP MAIN FLANGE CUTTING MACH  MEACTOR ACCESS ENCLOSURE  DOCKSION REFLEXING REALDSURE  CGAME, 10 TON OFT  DETERMENT OF TON OFT  DETERMENT OF TON OFT  DETERMENT OF TON OFT  DETERMENT OFT OFT  DETERMENT OFT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERMENT OFT  DETERM		: ITEM DESCRIPTION	:017.	- :	OTAL CO	)ST: 0TY	. :	TOTAL		. 91		TOTAL			TOTAL	COST
REACTOR ACESS ENCLOSURE  SEACTOR ACESS ENCLOSURE  SCRAME, 10 TOW OET  CRAME, 10 TOW OET  SCRAME, 10 TOW OE			••			••	••				••		••		••	
MCP MAIN FLANGE CUTTING MACH  **REACTOR ACCESS ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE PATTOR ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE REFLECIANG ENCLOSURE  **DECKSOBE R		**					••			••	••		**			
######################################		••					••		•		••		••			
REACTOR ACCESS ENCLOSURE   1	K 081	THE MAIN FLANGE CUTTING MACH				••	••			~	••	0.5	••		••	
DOCKSIDE REFUELING ENCLOSURE : 1 0.9 : 1 0.0   1	K082	REACTOR ACCESS ENCLOSURE				••	••			-	••	1.2	••		••	
CRAME, 10 TOW OET   CRAME, 10 TOW OET   CRAME, 10 TOW OET   CRAME, 10 TOW OET   CRAME, 10 TOW OET   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME   CRAME	K083	:DOCKSIDE REFUELING ENCLOSURE	••				••		-	-	••	6.0	**			
DIESEL BAGINE FLUSHING RIG  DIESEL BAGINE FLUSHING RIG  DD2 SGG EQUPORT PLATFORMS  DD2 SGG EQUPORT PLATFORMS  DD2 SGG EQUPORT PLATFORMS  DD2 SGG EQUPORT PLATFORMS  RAMP  WATER PIT FACILITY  WATER PIT FACILITY  WATER PIT FACILITY  STEPLACE LAMIMATING PRESS  RADIAL DRILL 15" X 14"  STEPLACE LAMIMATING CENTER  SUBTOTAL NEW OR EXPANDED TECHNIQUES, 47.3 S.2 S.2 S.9 S.9  CAPABILITIES, CAPACITIES  CAD/CAM EQUIPMENT AMO/OR SYSTEMS  CAD/CAM EQUIPMENT AMO/OR SYSTEMS  CAD/CAM EQUIPMENT AMO/OR SYSTEMS  CAD/CAM EQUIPMENT AMO/OR SYSTEMS  CAD/CAM EQUIPMENT AMO/OR SYSTEMS  CAD/CAM EQUIPMENT AMO/OR SYSTEMS  CAD/CAM EQUIPMENT AMO/OR SYSTEMS  CAD/CAM  MISC. CAD/CAM  PAGE S OF 8 PAGES  WHISC. CAD/CAM	K084	CRANE, 10 TON OET				••	••			-	••	0.2	••		••	
DIESEL ENGINE FLUSHING RIG   1   1   0.2   1   1   1   1   1   1   1   1   1	K 085	PLTFM SHAFT/PROP PLTFM	••				••			<del>-</del>	••	8.0	••			
DRYDOCK SUPPORT PLATFORMS	K 0 8 6	DIESEL ENGINE FLUSHING RIG		••			••		•	-	••	0.5	••			
######################################	K087	SORYDOCK SUPPORT PLATFORMS					••		-	~	••	0.2	••			
#AATER PIT FACILITY  ##ATER PIT FACILITY  ##ATER PIT FACILITY  ### ### ### #### #### ##############	K 088	:DD2 S6G EQUIPMENT					••		-	-	••	2.0	••	_	-	~
STEAM DUMP CONTROL, 688 CLASS : : : : : : : : : : : : : : : : : :	K089	GEVE.					••			<del>-</del>	••	1.7	••	-	-	
STEAM DUMP CONTROL, 688 CLASS   STEAM DUMP CONTROL, 688 CLASS   STEAM DUMP CONTROL, 688 CLASS   STEAM DUMP CONTROL, 688   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER   STEAM DUMP CENTER DUMP CENTER   STEAM DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP CENTER DUMP	K090	WATER PIF FACILITY					••		-	••	••		••	2	~	
RADIAL DRILL 15" X 14"	K091	688	••				••				••		••	~		۸.
SUBTOTAL DRILL 15" X 14"	K092	REPLACE LAMINATING PRESS				••	••				••		••	_		61
SUBTOTAL MACHINING CENTER	K093	RADIAL DRILL 15" X 14"	••	••			••		-		••		**	-		61
SUBTOTAL NEW OR EXPANDED TECHNIQUES, 47.3 : 5.2 : 8.9 :	¥094	:VERTICAL MACHINING CENTER				••	••		-		••		••	-		
SUBTOTAL NEW OR EXPANDED TECHNIQUES, 47.3 : 5.2 : 8.9 : 6.9 : 6.4 : 6.5 : 6.9 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5 : 6.5							••		,	••	••		••			
SUBTOTAL NEW OR EXPANDED TECHNIQUES,   47.3   5.2   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9   6.9		••				••	••				••		••			
CAPABILITIES, CAPACITIES  CAD/CAM EQUIPMENT AND/OR SYSTEMS  CAD, CODE 365, PHASE I  MISC. CAD/CAM  PAGE 5 OF 8 PAGE : 1			s,		47.3		••	5.5			••	8.9	••		: 11.9	•
CAD/CAM EQUIPMENT AND/OR SYSTEMS : : CAD, CODE 365, PHASE 1 : 1 : : HISC. CAD/CAM : 1 :		CAPABILITIES, CAPACITIES					••		٠		••		••		••	
CAD/CAM EQUIPMENT AND/OR SYSTEMS : : : CAD, CODE 365, PHASE 1 : 1 : : HISC. CAD/CAM : 1 : PAGE 5 OF 8 PAGES : : 1						••	••		•		••		••		••	
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NAVY INDUSTRIAL FUND
ASSET CAPITALIZATION PROGRAM
FY 1990/1991 PRESIDENT'S BIENNIAL BUDGET
(DOLLARS IN MILLIONS) DEPARTMENT OF THE NAVY

ACTIVITY GROUP: WAVAL SHIPYARDS ACTIVITY: ALL WAVAL SHIPYARDS

		••	<b>.</b>	1988		F	1989	••		FY 1990	••		FY 1991	••
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	••							••			••	••		••
K 0 9 7	:CAD PLOTTER	-		0.1		••					••	••		••
K098	:CAD/CAM IMPROVEMENTS	9	••	0.2		••		••	11	6.0 :	••	۰.	0.3	••
K099	:CAD/CAM EXPAND-3					••			-	6.0 :	••	••		••
K 100	:CAD/CAM EXPAND-4	••	••					••	_	. 0.5	••	••		••
K101	:CAD/CAM SYSTEMS		••			••		••	VAR	. 0.5	••	VAR :	2.3	••
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	SUBTOTAL CAD/CAM EQUIPMENT/SYSTEMS		••	8.0		••	0.0	••		2.8	••	••	5.6	••
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	••							••			••	••		**
	MAJOR ADP EQUIPMENT/SYSTEMS					••		••			••	••		••
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K102	: TRANSPORTATION DATA SYSTEM	-		0.1		••		••		••	••	••		••
K103	:APS UPGRADE			9.0		••		••		••	••	••		••
K104	:EFT/CODS/SABRS	<del>-</del>		7.0		••		••			••	••		••
K105	ZS-ZG-	-		6.0		••				••	••	••		••
X106	: SLIMS COMPUTER	-		7.0		••		••		•	••	**		••
K107	: NW DATANET PROC	-		0.1		••		••			••	••		••
K108	GROUP TECH	- :		9.0		••		••		•	••	••		••
K109	:NED COMPUTER SYS			0.5		••		••		••	••	••		••
x110	: APADES	-		0.7		••		••			••	••		••
K111	:AUTO TOOL CONTROL SYSTEM (ATCS)	. 2		1.4	-		0.9			••	••	**		••
K112	THE FRONT END PROCESSOR	-		0.1	-	••	0.1				••	••		••
K113	SEE DISC	-		0.2	<del>-</del>		0.2	••			••	••		••
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DEPARTMENT OF THE NAVY
NAVY INDUSTRIAL FUND
ASSET CAPITALIZATION PROGRAM
FY 1990/1991 PRESIDENT'S BIENNIAL BUDGET
(DOLLARS IN MILLIONS)

ACTIVITY GROUP: ALL NAVAL SHIPYARDS ACTIVITY: ALL NAVAL SHIPYARDS

			FY 1988		FY 1989		7	FY 1990	••	FY 1991	•
: LINE : NO.	. ITEM DESCRIPTION		TOTAL COS	.: 017.	: : : : : : : : : : : : : : : : : : :			OTAL COST	. 017.	017. : 107AL COST : 017. : 101AL COST	
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		••	,	••			••	,		••	••
: K114	:LOGMARS (PHASES 1 & 11)	 -	0.2			<del>-</del> 		0.5			"
: K115	: #ONEYWELL AUGMENTATION		7.9		12.3		••	-:		2.9	••
: K116	:LOCAL AREA NETWORK SYSTEM	: VAR :	7.0	. VAR	9.0	: VAR	 ex	•9.	. VAR	1.4	**
: K117	:MISC ADPE	· VAR :	2.1	. VAR	2.1	٠, ٨	 ~	۴.	. VAR	2.0	••
: K118	:MINI COMPUTER			- -	. 0.3		••		••		••
: K119	TIME AND ATTEND PH-II			-	0.5						••
: K120	: EDMICS					-	••	3.5	. 2.0	5.7	••
: K121	HUCLEAR WORK MGT SYS					?	••	0.5	••	••	**
: K122	:SUPERVISOR'S DESK			. VAR	1.4	. VA		4.3	. VAR	5.4	••
: K123	: PRODUCTION MIS					••	••	7.1	••	3.7	••
: K124	RELATIONAL DATA BASE						••		-	••	**
: K125	:COSMOS 11	••							. VAR		••
: K126	:COSMOS 1					••	••		: VAR	: 0.2	••
: K127	FASS UPGRADE					••	••		-	••	••
	••	••		••			••		••	••	••
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••	SUBTOTAL MAJOR ADP EQUIP/SYSTEMS		15.1		18.4		••	17.8		: 23.9	••
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DEPARTMENT OF THE NAVY
NAVY INDUSTRIAL FUND
ASSET CAPITALIZATION PROGRAM
FY 1990/1991 PRESIDENT'S BIEWNIAL BUDGET
(DOLLARS IN MILLIONS)

ACTIVITY GROUP: MAVAL SHIPYARDS ACTIVITY: ALL MAVAL SHIPYARDS

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•	ITEM DESCRIPTION	. 414.	: : TOTAL COST: 91Y. : TOTAL COST		: TOTAL COST		017.	: : : TOTAL COST	. 91Y.	GTY. : TOTAL COST
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	:ALL OTHER ACP UNDER \$1.0M		. 60.4		36.2		••	10.8		: 29.9
			••		••	••	••		••	••
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K 1 C Y	HINGR CONSTRUCTION PROJECTS		5.1		. 7.4	••	•	5.4		5.5
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K130 :0	COTHER MGMT INFO SYSTEMS UNDER		••			••	••			••
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<b>=</b>	:NAVAL SHIPYARD TOTAL		140.8		89.1	••	••	81.0	••	: 85.7
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is. The purpose of these projects is to provide the transportation shop with portal cranes with sufficient lifting capacity: sahips. This is a continuing program to replace six (6) obsolete portal cranes over the next six (6) fiscal years, starting: :FY 1990/1991 PRESIDENT'S BIENNIAL: :KOO1 CRANE, PORTAL (CONTINUED FROM PAGE 1): .f. This crane will support a heavy workload of multiple submarine and surface craft overhaul weight handling requirements.: :It will replace an existing crane that is more than 53 years old and constantly down for repairs. This project is part of suppont the mater-front workload for repain and overhaul of SSM 688 plass nuclear submarines. Since this portal spurpose unit sveilable for either nuclear or non-nuclear projects, thus saving the cost of an additional medium size unit. of the Shipyard's long range modernization plan to replace the 17 existing portal cranes which are all more than 40 years: ithe ability to lift a complete reactor from a submarine undergoing overhaul. Project sill be funded in two stanes in two .be easily adapted to operate at a 90 ton or 150-ton capacity by removing or adding counter seights, it becomes a multiproject will provide the Transportation Shop with a portal crane with sufficient lifting capacity and reach to :Drojected Korkload requirements with the current inventory of cranes which have significant limitations and maintenance C. ACP-1 LINE NO. & ITEM DESCRIPTION sand reach to adequately support the waterfront workload of repair, conversion, and overhaul of submarines and surface probless. Korkload essignaents of sultiple subserines and surface ships have generated an incresse demand for 25-ton cranes. The cranes to be replaced by these projects do not meet current safety standards and cannot be certified to in FY 88. The need for the requested cranes is based on an economic analysis of this shipyard's ability to support sauccessive fiscel years; this year and FY 90. Mare Island does not have a portal crane with this lifting capacity. PNASE 11 FY 90. 150 ton portal crane has been mandated in order to provide the Shipyard with the ability to Purchase of one 150-ton portal crane has been mandated in order to provide the shipyerd with A. BUDGET SUBMISSION : mission essential to overhaul/repair work at shipyard. Therefore, no internal rate of return is available. elifit a complete reactor from a arbmarine undergoing overhaul. This is a follox-on project begun in FY 69. This project has a calculated payback of 5 years and an internal rate of return of 30%. ACTIVITY: PHILA, NORVA, CHASN, MARE, PUGET & PEARL ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET ACTIVITY GROUP: MAVAL SHIPYARDS INDUSTRIAL FUND/ACTIVITY GROUP/ACTIVITY support special purpose service operations. NAVY INDUSTRIAL FUND

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: The purpose of this project is to modernize Machine Shop capabilities by replacing one 29-year old conventional Ver : Spindle Willing Machine NID#9266700-1698 (1957) with one CNC Horizontal Machining Center. The new machine is confi : to the latest technological advances and is recommended under the Shipyard Modernization Program and is consistent	this project Machine NIL Schnological	t is to mode 0#9266700-16 1 advances a	modernize Machine Shop 0-1698 (1957) with one es and is recommended u	nine Shop ca with one CR ommended und	pabilities b C Horizontal er the Shipy	y replac Machini ard Mode	bilities by replacing one 29-y Horizontal Machining Center. the Shipyard Modernization Pr	year old conventions The new machine is rogress and is consis	capabilities by replacing one 29-year old conventional Vertical CNC Horizontal Machining Center. The new machine is configured Inder the Shipyard Modernization Program and is consistent with	 - 7: -
: the Industrial Planning	lanning Syt	System Report	1PS-3, Equ	Equipment Category M-411	gory M-411.					••
: Internal Rate of Return # 11.40%.	Return		ack withir	5.79 Years	Payback within 5.79 years. Annual Savings		= \$24,027.			••

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	above four inches in thickness. Will have to be replaced if this	to be	- se	aced if	this n	ine source for this project is not appro	10 t	approved.	cesera ved.	nas decayed	3 y e C	to the		point that it will	8 00 10		<b>6</b>	
	The ability of the RII System to	ty of 1	the	III Syste	± to s	give fast	feed	back	per no	iograph	<u>.</u>	1specti	ons enhanc	es all of	the inv	back on radiographic inspections enhances all of the involved shops		
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4 and 32 year old bridge cranes are required to support machine shop operations.  1 business. This practice is both expensive and time-consuming and adds to losts a mandatory replacement.	LEMENTS OF COS	)T:0TY.	TINO	COST: T		0.120	TY::	DILL		DTAL CO	57:07	Y	NIT CO	ST: T0	TAL CO	ST:01	Y.:UNIT		TOTAL COST	· +
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	ACT IV	ACTIVITY GROUP: NAVAL SHIPYARDS ACTIVITY: MARE ISLAND NAVAL SHIPYARD	ISLAND (	NAVAL SHIPYARDS	DS IPYARD				: KUZ6 CMC	KO26 CMC 100L GRINDER (POS1-91)		- 1 504)	ŝ	••	
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: The purpose of this project is to	this	roject is		ide Shop	31 100	provide Shop 31 Toolmakers with a modern 5maxis CMC Tool and Cutter Grinder. The equip-:	th a mode	rn 5=8)	KIS CHC TO	ol and Cu	tter G	rinder	. The	iquip.:	
: ment presently being used is one o	being	used is or	u ble st	niversal	Tool 6	id Universal Tool Grinder manufactured in 1918 and one companion Grinder built in 1978.	ufactured	in 191	18 and one	companio	n Grin	der bu	fit in	1978. :	
. Reither mechine is capable of automatic operations and nether can support the required range of operations.	18 CB	pable of a	utomati	c operst	ions an	d nether c	en suppor	t the I	required r	ange of o	perati	ons.	Acquisition	rion :	••
. of the requested prinder will provide Shop 31 with the ability to autobatically prind all configurations of and mills from:	ed aring	der will p	provide	Shop 31	with th	e ability	to automa	tically	y grind at	l configu	retion	* of *	TILE PU	from:	
						A 4 5 0 - 10 0 0	91119							•	

: 1/4 inch through 2-1/2 inches in dismeter as well as odd-sized end mills. : : : Internal Rate of Return = 18.50%, Payback = 4.2 years.

	S Y	ASSET CAPITALIZATION	L12AT10		SUL MA	PROGRAM JUSTIFICATION	ION SHEET				: A. BUDGET : FY 1990/1	ET SUB	BUDGET SUBMISSION 1990/1991 PRESIDENT'S			
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		ACTIVITY GROUP: ACTIVITY: MARE		NAVAL	SHIPYARDS Naval Shi	RDS SHIPYARD	۵			: K027 C	K027 CNC PUNCH (P020-91)	(P020	1-91)		• ••	
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proj	projects will generally follow the	enerally fo	ollow th		5		ng is	typically the first	ent an first	existing CMC punch. operation. With the	cac punc	•	Sheetmetal existing at	Sheetmetal fabrication existing automated	 	
s he s	shearing system, blanked material	, blanked m	naterial		terally	funne /	the	punch press	ss depa	department where it	ere it t	ypical	ly back	typically backs up becaus	98	
	xisting	nch cannot	handle.	-	<u> </u>	oad because	o t	constant tool c	changes.	The new punch	punch *	i	rtually	will virtually eliminate		
		and thus reduce	e py e	+ actor	- - -	to 1.									•• •	
Inte	Internal Rate of Return = 23.58%,	f Return =	23.58%,	Payback	11	3.73 yea									• ••	_
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: NARRATIVE JUSTIFICATION:	8 T I F I C	AT 10N:												**
. The Pipe Shop is presently using		7	•	antiquate	d Pipe (	in antiquated Pipe Bending Roll built in 1936. This is the only pipe bending roll	l built	n 1936.	This is	the only	pipe ber	nding r	110.	••
: capable of bending large radius m	ending			riel that	cannot	iterial that cannot be bent on conventional draw benders. The company that built this	conventi	ib leno	raw benders	. The co	mpeny th	hat buf	it this	••
: machine in 1936 has long been out of business and there are not other companies which can provide parts. Logistical : this old machine is near impossible to maintain because each time a part is required, it must be reverse-ensineered	936 he ifne f	e long	been out of	business to mainta	and the	of business and there are not other companies which can provide parts. Logistically, e to maintain because each time a part is required. It must be reverse-ensineered and	other co	mpanie:	s which can suired, it	aprovide	perts.	Logist	rically,	•• •
: locally fabricated, a practice wh	cated	, a pr.	actice which	is very	expensi	ich is very expensive and very time consuming. This is a mandatory replacement.	time con	SUMING.	This is	a mandato	ry repla	BCGBGJC		•••
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	-	ACTIVITY ACTIVITY	ACTIVITY GROUP: ACTIVITY: PUGET	MAVAL S	IVAL SHIPYARDS Sound Maval Sh	RDS SHIPYARD	0			KO29 PLASMA/OXYGEN CUTTING SYSTEM (P192-86)	SMA/OX1	OXYGEN CU (P192-86)	TTING SYS	.168	•• ••
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This project provides underwater	t pro	vides u	Inderwater	5	pu ·	bevel c	utting and bevel cutting capability for the welding shop	sility for	the wel	ding shop	(Shop	26).	CNC control	10,	• ••
provides nesting and plate marking	sting	1c pue	ides nesting and plate marking	B (	bility	The	capability. The underwater torch eliminates noise and smoke hazards.	torch eliminates noise	inates n	oise and	smoke I	smoke hezards.	= +	fifteen veer	
The project	900 C	menteti	on and to	chnical	requi	rements	The project documentation and technical requirements for the system are currently under development. It is	Item are c	urrently	under de	velopm	nt.		expected that	2
the equipment be a turnke	7 COJ Y	tract,	equipment will have an internal ternkey contract, including in		e of r lation	eturn g by the	quipment will have an internal rate of feturn greater than 15% and turnkey contract, including installation by the contractor.	8 DUS XCI	a payoack	Delion (see Chan seven Yesfe.		# A B B B B B B B B B B B B B B B B B B			-
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C 0 J	conventional machine tools. We envision a useful life in excess of 20 years when complied with its CNC, updated with the	chine tool	s. Ve	envision	8 0	eful Li	fe in exces	s of 20 yea	ars wher	complied	with .	its CNC	abdu ,	ted wi	th the
8 t 8	state-of-the-art, as required.	t, as requ	ired.	An inte	rnal r	ate of	internal rate of return higher than 15% is reasonable with payback period of less than	er than 151	X is rea	sonable ,	vith pay	yback p	seriod	of tes	sthan
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This project is necessary to insu	9 - 1 0 - 1	8 8	۷ ده .		re that the MAVSEA propeller	t 5 th 5 th 5 th 5 th 5 th 5 th 5 th 5	MAVSEA	dord i		, a		ds	ments are layout of	met.	propeller.	ir. Layout of	t t
present Method/Problem - propeller insures proper smold require the use of a	od/Problesures prothe use		spacing spacing a pitchom	- e e	and location of the eter in the foundry.	tion the f	of the foundry.	e bla		. <del>-</del>	y, set-up			su.	<b>t</b> 0	create a propelle	2
Proposed Method/Solution - Procur finishers in building 1029 will a pitchometer will relieve the 26-y	hod/Solu buildin will rel	ution ng 10: lieve	- Pro 29 #il the 2	ocuremer {{ s{{o;}}	t of the	an addit three-ye pitchomet	dditi e-yeg omete	ional p ar old er.	additional pitchometer with eeryear old pitchomecer to be chometer.	ster wi	ith digi to be us	digital read-outs for use with the oe used in the foundry. The three-y	ad-outs for the foundry	or use Iry. T	e with t The thre	th the propeller three-year old	
PAGE 21 OF 70	OF 70 PAGES	:	•		:	:		•			1 1 1 1				· · · · · · · · · · · · · · · · · · ·		  - 

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RARRATIVE Reactor Pl removal du	MARRATIVE JUSTIFICATION: Reactor Plant Cooldown system is re	JUSTIFICATION:		tem s	Ę				to replace the	P P 6	present reactor plant fto support the SSR-688	Bectol:		1t fre:	Diant fresh water system to support	system t	o suppo	rater system to support decay heat submanine and the old systems whi	E P I C P
do not have capability.	do not have the capacities required capability.	c a p a c i	t i e	requ'	red for	<del>\$</del>	Š	89 99 - <b>X</b> SS	88 - 1 0 88	g g	scbaarine.	 di	This	D	B to T Y Term	Lacement	r i c h	is mandatory replacement which increases	

<b>«</b>	ASSET CAPITALIZATION (BOLL	. <	PROGRAM JUSTIFICATION PRO IN THOUSANDS)	SHEET			A. BUDGET SUBMISSION : FY 1990/1991 PRESIDENT'S : FY 1990/1991 PRESIDENT'S	SSION SSION ESIDENT'S BIENNIAL	Yr: "
S	INDUSTRIAL FUND/ACTIVITY GROUP/ACTIVITY NAVY INDUSTRIAL FUND ACTIVITY GROUP: NAVAL SHIPY ACTIVITY: PUGET SOUND NAVAL	SROUP/ACTIVITY FUND I NAVAL SHIPY	IVITY SHIPYARDS NAVAL SHIPYARD			: C. ACP-1	C. ACP-1 LINE NO. & ITEM DESCRIPTION KO71 PUMP VALVE TEST FACILITY UPGRADE (P043-87) (P045-88)	& ITEM DESCRIPTION FEST FACILITY UPGRADE 045-88)	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	. 60 			68		FY 90	· · · · · · · · · · · · · · · · · · ·	FY 91	: "
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MARRATIVE JUSTIFICATION:  The shipyard was directe  pumps which have been over  comply with the requirem  Projects PO43-87 and PO4  of this project is requi	MARRATIVE JUSTIFICATION: The shipyard was directed to upgrade and improve its capability for post overhaul testing of water, fuel oil and lube oi pumps which have been overhauled by the shipyard prior to reinstallation aboard a ship. This action is necessary to comply with the requirements of OPNAVINST 4700.7E. A 1500 PSI boiler system is being acquired as part of the FY 86 ACP: Projects P043-87 and P045-88 design, manufacture and install test stands to conduct pump performance testing. Completio of this project is required to support the CVN-70 (USS CARL VINSON) FY 90 complex overhaul.	grade and imid by the Sri	prove its ca pyard prior 700.7E. A 11 cture and in CVN-70 (USS	pability for to reinstalla 500 PSI boile stall test st	post over	haul testing rd a ship. is being acconduct pump	ade and improve its capability for post overhaul testing of water, fuel oil and lub by the shipyard prior to reinstallation aboard a ship. This action is necessary to PNAVINST 4700.7E. A 1500 PSI boiler system is being acquired as part of the FY 86 gn, manufacture and install test stands to conduct pump performance testing. Compl pport the CVN-70 (USS CARL VINSON) FY 90 complex overhaul.	oil and tube oil necessary to f the FY 86 ACP:	
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B. INDUSTRIAL			RS IN THOUSANDS	(SQN				•	: : FY 1990,	1990/1991 PRESI Budget	PRESIDENT'S BIENNIAL 3UDGET
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NARRATIVE JU						. ,	;			;	
uyancy tar fting them	Bouyancy tank set will give I lifting them to the required	l give Portsmouth equired 24" sill o	Navaí :learan	pyard	the new	capability	0 0	dock SSN-688	c i ass	ships in	drydock #1 by
This is a local With associated		manufacturing projechain, cradles and	ect, consisting of a "steamboat ratchet		set of four turnbuckles"	of four 16' uckles".	' diameter	ter x 30' long	ing cyline	cylindrical to	tanks, 3/8" thick
onstruction must be		completed to	support SSN-709	d M	currently scheduled	y schedi	uled to	start 3 FEB	1992.		

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: To replace two 20-ton-capacity Sha	two 2(	0-ton-(	capacity S		guilpe	Dollies	ft Handling Dollies with two 60-ton-capacity units.	60-ton-c	apacit	y unit	8. This	s equi	pment is	equipment is used to handle	die
. Large, heavy underwater components	y unde	erwate:	r componer		in drydock		press trat are inschessible to	naccessib	le to	portel	portal crames. It		Virtually	ly eliminates	t he
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: Existing Dollies are old and obsol	l lies	are o	edo bas bi	ete,	received from	d from	New York	Shipyard in 1963.	in 196		tual se	rvice	life is	Actual service life is approx. 32.	32. years.
: Due to age of equipment and the di : Frequent repair is necessary to ma	of equ	uipment is nece	to age of equipment and the di uent repair is necessary to aa	difficul maintair	fficulty of intain this	replacing equipment.	replacing parts, equipment has become badly worn, equipment.	equipmen	t has	become	badly	WOLU,	unrelial	unreliable and unsaf	
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: out-of-service periods waiting for : acquisition and use of the equipme	ice pe	eriods use of	waiting 1 the equip	for repair oment.	ir parts,	s, and	use of tin	ne and ta	bor-co	nsumin	COUVE	ntiona	1981	and use of time and (abor-consuming conventional rigging methods) i	u)
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: drydock periods and corresponding longer overhaul periods.

: It should be noted that use of this type of equipment for handling large, heavy underwater components is mandatory if the shipyard is to meet the schedules for ship overhauls now imposed. Reversion to conventional rigging methods will lead to

	88 <b>8</b>	SET CAPI	ASSET CAPITALIZATION	•	SOF MY	PROGRAM JUSTIFICATION	ON SHEET	, , , , ,	• • •			A. BUDGET		NOISSINBNS		
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The purpose of this project is to required to allow close proximity	this projetow Close E		provide the Ring placement of sup	igger Shop (72) with two additional drydock service platfores, wh support equipment/machinery along-side vessels, while in drydock,	with two ac t/machinery	iditional 7 along-si	drydock se de vessels	rvice platfo . while in d	provide the Rigger Shop (72) with two additional drydock service platforms, which are Discement of support equipment/machinery along-side vessels, while in drydock, These	
units are requi	are required to support concess Plan.	u		availabilities.	es. This e	equipment is	is mandated	d by the Subserfae		

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	¥ V	ASSET CAPITALIZATION	1 Z A T 1 O N		SOF HY	PROGRAM JUSTIFICATION	ON SHEET					BUDGET	BOS.	A. BUDGET SUBMISSION		• • •	· · · · ·
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		ACTIVITY:	MARE	ISLAND	MAVAL	SHIPYARD		•		;	(P011-90/P004-91)	004/06	4-91)				• • •
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RRATIVE Demand	NARRATIVE JUSTIFICATION: RAMP (Rapid Acquisition of Manufactured Parts) is a self-contained machine shop, run by software, which can produce part son demand from prepresitioned raw materials and digital parts data. Through FY 91 the Navy plans to procure a total of three RAMP cells which will be installed at NADEP Cherry Point, Naval Avionics Center Indianabolis, and Charleston Maval	and and and and and and and and and and	red Parts) erials and	is a self- digital pa EP Cherry	contained ints data. Point, Na	machine s Through	hop, run by	software,	tured Parts) is a self-contained machine shop, run by software, which can produce aterials and digital parts data. Through FY 91 the Navy plans to procure a total talled at NADEP Cherry Point, Naval Avionics Center Indianapolis, and Charleston w	Toduce to be considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the considered to the
sthe Avionic ment of one FY 92.	sanipyard. The cells at the NADEP and Shipyard will be configured to produce small Machanical Parta (SMP) while the cell at sthe Avionics Center will be manufacturing Printed Wiring Assemblies (PWA). Funds requested will provide for the establish ment of one SMP cell and associated software (for NAC use FWA) RAMP cell at Charleston which will be fully operational in sety 92.	NADEP and manufact ociated	d Shipyard uring Print software (1	will be co ted Wiring for NAC use	nfigured Assemblie FWA) RAM	to produce s (PWA). P cell at	small Mac) Funds reque	sanical Part sted will p which will	and Shipyard will be configured to produce small Machanical Parta (SMP) while the cell cturing Printed Wiring Assemblies (PWA). Funds requested will provide for the establish d software (for MAC use FWA) RAMP cell at Charleston which will be fully operational in	le the cell the establi erational
IP techno	:RAMP technology provides the flexibility to efficiently produce small Lot size (as small as one) over a wide range of	flexibi	lity to eff	iciently p	roduce sm	all Lot si	re (as smal	(as one) o	ver a wide	range of
parts third atty up to 5,000 per we	The is controlled by the synna per work cell).	Der 100	K cell).	Arough the			•			

digital drawings and specifications, Computer Aided Process Planning, Group Technology schemes and telecommunications, RAMP: readiness through increased availability of spare parts. Spare part inventory levels and carrying costs are also expected : :administrative (eadtimes (up to 90%), establish sources for hard to obtain spare parts at reduced unit costs, and improve : :The estimated Internal Rate of Return (IRR) for RAMP investment is estimated to be 122%. The estimated Return on Investwill provide improved quality and repeatability. In addition it is expected that RAMP will decrease procurement and : ment (ROI) is approximately 142% (5 years) and 115% (lifetime) with a payback of less than one year (.87 years). to be significantly reduced through use of Just-In-Time philosphy for Customer ordering of RAMP produced parts.

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PROGRAM JUSTIFICATION SHEET  IP/ACTIVITY  IAVAL SHIPYARDS  SOUND MAVAL SOUND MAVAL SHIPYARDS  SOUND MAVAL SHIPYARDS  SOUND MAVAL SHIPYARD	ACTIVITY GROUP/STIVITY  ACTIVITY GROUP/STIVITY  THOUGHTS SOUND MAYAL SHIPPARDS  FFY 56  FFY 56  FFY 56  FFY 56  FFY 56  FFY 56  FFY 57  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL SHIPPARDS  THOUGHTS SOUND MAYAL S					•			
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The present equipmen any time. Presently operated on the 1st production days per	pment has intly it is 1st shift per year.	the 9.455 89e	end 985 1 7.	ful service o constantly day by one	of its useful service life, is worn out, and per year to constantly maintain the existing 25 hrs per day by one operator (5 hrs equipme	n out, and prone in existing unit.	a the	complete breakdown existing laminating 2.25 hrs set-up) 25	wn at ing is 252
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The requested Computer-Aided-Design and Drafting (CAD) System will be used to automate the design and drawing development :improve product quality through increased accuracy, standardization and early elimination of material interferences; and :04K13A/NGM, 4720 Ser 1569 of 3 Jan 1979) and Non-DSA/FMP Computer-Aided-Graphics Study and Analysis (PNSY ltr Code 248 interfacing with computer-sided-manufacture. NAVSEA established CAD benefits in its DSA/FMP Drafting Survey (SFA [tr processes for the purpose of: increasing productivity; decreasing the time required to complete the design process; :(TJP) Ser 5230 of 11 May 1979).

complete assignments within allowed timeframes while minimizing need for contractor support. The manual process makes it instailed CAD systems provide the latest tools and technology for the engineering and design field. These systems have involving an experienced staff and farmout contracts to handle excess workload. Increased productivity is required to interference detection is required. Improvement here would have a significant impact on time and cost savings. Newly :revolutionized the field, obsoleting the manual process. Individual productivity is raised by an average of 43.7%, as especifications; Design development; drawings and documentation preparation. This method is largely labor intensive the majority of the work in the Design Division involves redesign of existing ships. This requires: extraction of difficult to eliminate material interferences during the production cycle. An automated procedure for large scale engineering data from existing drawings and shipcheck documents; analysis of required changes according to NAVSEA :identified in NAVSEA surveys.

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if will provide an integrated, user-friendly, state-of-the-art information system which will help the first-line supervisor: end any other standard or local system which provides data required by desk. Information pertaining to job order, key:operation, scheduled start and stop dates, and manhour allowances will be extracted from PC. Output for desk will provide plan and control his assigned work, thereby allowing him to spend more time at the work site. The system will interface with the standard shipyard MIS, specifically the production control (PC), and the financial payroll (FP) modules, ATAMS, :FP with time and attendance labor costing data, etc.

This is a mandatory ADP system.

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The COSMOS system (I and II) is a	bra () ma	II) is a node	of the	shipyard's NORVANET		system which is an i	interactive/batch		word processing	2
application. Mistorical data from	Storical		ious ship	repair availabilities	ilities is	stored,	retrieved and	d updated to	to generate	job
orders job materials (1818.	81961	rs. Considered	E	essentist.						
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	AS	SET CAPIT	ASSET CAPITALIZATION	PROGRAM JUSTIFICATION	JST 1 F I CA ]	TION SHEET				SUBMISSION	<b>R</b>	
			(DOLLARS IN	2 2	THOUSANDS)				:FY 1990/19 :	1990/1991 PRESIDENT Budget	S	BIENNIAL
	INDUSTRIAL			DUP/ACTIVITY UND NAVAL SHIPYARDS	rards Shipyard			. C. AC	C. ACP-1 LINE NO. & ITE		TEM DESCRIPTION	
:	•	:	FY 88			FY 89		FY 90			FY 91	
ELEMENTS	OF COST: 0	T: aTY .: UN	COST: DTY .: UNIT COST: TOTAL	COST	: OTY : UNIT	T COST: TOTAL	COST:01Y.:	UNIT COST:TOTAL	TAL COST: QTY.	CONIT COS	COST: TOTAL C	COST
END ITEM								•• ••		800		
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NARRATIVE JUSTIFICATION	JUSTE	FICATIONS	t ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;					,				
To upgrade the Shipyard's present	ه خ ه	Shipyard'		system by	install	installing the next	generation	computer	presently being developed by MSSD.	g develope	SSM AQ PA	
		1 1 1 1 1	1				1	1				
PAGE 67 OF 7	70 PAGES	ES				21	<b>K</b> -					

S	SET CA!	ASSET CAPITALIZATION		ROGRAM	JUSTIF	PROGRAM JUSTIFICATION	SHEET	-				:A. BUDGET : :FY 1990/19	DGET S.	BUDGET SUBMISSION 1990/1991 PRESIDENT'S		E BIENKIAL:
				E IN TE	THOUSANDS	ŝ						••	,	BUDGET		
B. INDUSTRIAL FUND/ACTIVITY GROUP/ACTIVITY NAVY INDUSTRIAL FUND	FUND/ACT	FUND/ACTIVITY GROUP/ NAVY INDUSTRIAL FUND	GROUP/	/ACT1V1	<u></u>	, , , , , ,		! ! ! !	! ! !	· · · · · · · · · · · · · · · · · · ·	C. ACP	C. ACP-1 LINE NO.		A ITEM DESCRIPTION	ESCRIPT	NOI
	ACTIV	ACTIVITY GROUP: N ACTIVITY: ALL NAVA	HAVAL	AL SHI	SHIPYARDS PYARDS					•• ••	K128	A11 0t	her AC	K128 All Other ACP Under	E	
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ELEMENTS OF COS	T:01Y.	COST:91Y.:UNIT COST:TOTAL	ST:101A	11 COST	COST: OTY.: UNIT		COST: TOTAL		COST: 9TY .: UNIT	UNIT CO	COST:TOTAL		: 0 T Y . :	COST: 9TY.: UNIT COST: TOTAL	s	L COST
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PLANT EQUIPMENT																
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MARRATIVE JUSTIFICATION:	FICATIO	. NO	! !	, , , , ,	• • • •	· · · ·	• • •	1 1 1 1 1 1								
These items are required for Wava overage and unreliable equipment	requi	red for x e equipme	- 6	Shipyards and to incre	ards to increase	accomplish assign productivity to		assigned work, to ty to permit favor	ed work, permit fe	favorable			regulations, n with privat		replace shipyards	80 9

B. INDUSTRIAL FUND/ACTIVITY GROUM RAVY INDUSTRIAL FU		9	ASSET CAPITALIZATION F (DOLLAR	PROGRAM JUSTIFICATION RS IN THOUSANDS)	JUSTE	FICATI DS)	ON SHEET	E T				: FY 19	1990/1991	:A: BODGEL SCENISSION :FY 1990/1991 PRESIDENT'S :	E E	BIENNIAL
	L FUND/ACTIV NAVY INDUS ACTIVITY O	FUND/ACTIVITY GROUP/. NAVY INDUSTRIAL FUND ACTIVITY GROUP: NAV.	ITY GROUP/A	ACT AL SH	IVITY SHIPYARDS	; ; ;			•		C. ACR	C. ACP-1 LINE NO.		ACP-1 LINE NO. & ITEM DESCRIPTION K129 Minor Construction Projects	SCRIPT	
		FY 88	89	1 2 1 1 1	:		FY 89	) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	· · · · · · · · · · · · · · · · · · ·	FY 90	06	1	1	1	FY 91	
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UNSPECIFIED Minor Construc- 710n		> A A		5,072				7,434		> 4 8		5,352		* *		5,231
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MARRATIVE JUSTIFICATION: Funding is required for the conversion, replacement and	I FICATION			t	installation of existing			, , , , , , , , , , , , , , , , , , ,	, U		•	a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brain a brai		A		
PAGE 69 OF 70 PAGES	PAGES		•			•		0+0								

¥	ASSET CAPITALIZATION	PROGRAM	PROGRAM JUSTIFICATION	N SHEET			. A . B.	A. BUDGET SUB	SUBMISSION		** **
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B. INDUSTRIAL	INDUSTRIAL FUND/ACTIVITY GROUP/ACTIVITY NAVY INDUSTRIAL FUND	IP/ACTIVIT	· · · · · · · · · · · · · · · · · · ·				C. ACP-1 LINE NO. & ITEM DESCRIPTION	1 9 .0 M	TEM DES	CRIPTION	: "
	ACTIVITY GROUP: N	7 3	SHIPYARDS Mare Island Naval	AL SHIPYARDS		. <del>.</del>	K130 Other Mgmt Info Systems Under	Imt Info	Systems	Under SIM	
1			F #	6.8		FY 90			. 4.	FY 91	: " "
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SPACE AND MAVAL WARPARE RESEARCH AND DEVELOPMENT CENTERS
DEPARTMENT OF THE EAVY
HAVE INDUSTRIAL PURD INDUSTRIAL FUND ASSET CAPITALIZATION PROGRAM FT 1990/FT 1991 PRESIDENT'S BIRMIAL BUDGET (Dollars in Millions)

_		FY	FY 1988	FY	FY 1989	FY	FY 1990	FY	FY 1991
Line	) Item	_	Total		Total	_	Total	_	Total
Number	Description	Quant	Cost	Quant	Cost	Quant	Cost	Quant	Cost
1 2001	   Microwave Anechoic Chamber		1.8						
L002	Magnetics Laboratory Upgrade	<b>-</b>	1:1						
_ T003	Molecule Beam Expitaxy System	·	1:3						
L004	Sub Antenna Test Platform	·	0.2				1.3		0.2
	   Signature Imaging Radar Facility						2.2	<b>-</b>	
1 L006	LCC Engineering Equipment		3.5	<b>-</b>	5.5	- 	2.2	- 	2.0
1 2007	Sub HI-SPD LCH Facility	<b>~</b> 	0.1		<del></del> .		1.1		1.3
1 1008	Three Axes Heavy Duty Positioner				<del>-</del>		1.0		
£009	High Accuracy 2500# SCORSBY					<b>_</b>		·	1.3
L010	Imaging Radiometer	·	- 0.5	- 	1:1				
L011	Very Large Scale Tester			- 	1.3				
L012	   Photolithographic System						2.0		
1 1013	   Selective Tungsten Epitaxial   System							<b>.</b>	1.0
   L014 	Diffusion Purnaces							<b>.</b>	1.3
			7 50					IF EXHIBIT ACP-1 Page 1 of 5	rr ACP-1
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SPACE AND MAYAL WARPARE RESEARCH AND DEVELOPMENT CRITERS
DEPARTMENT OF THE MAY
MAY INDUSTRIAL PURD
INDUSTRIAL FUND ASSET CAPITALIZATION PROGRAM
FY 1996/FY 1991 PRESIDENT'S RIKHMIAL BUDGET
(Dollars in Millions)

		FY	FY 1988	FY	FY 1989	FY	FY 1990	FY	FY 1991
Line	Item	_	Total	_	Total		Total	_	Total
Number	Description	Quant   Cost	Cost	Quent	Cost	Quant	Quant   Cost	Quent	Cost
L015	Radar Signal Simulator	 					1.5	 	
£016	Wind Tunnel T-9 Driver Vessels					~	1.5		1.5
L017	Multisensor Integration Equipment			-	9.0	·	1.6	<b>-</b>	2.5
L018	Satellite Communication System					<b>.</b>	1:1		
L019	Compact RCS/Antenna Test Facility							·	2.0
L020	Large Anechoic Chamber						<u> </u>	·	2.1
L021	Computer Image Generator System					·	0:1		
L022	P-369 MILCON Collateral Equipment						2.2	·	2.6
	Total EQ Over \$1M		8.5		8.8	<del>-</del>	18.6		7.71
L023	CAEDOS Next Generation System							7	4.0
L024	32 BIT CADDS Work Stations							, <u> </u>	1 0.2
L025	Computer Aided Electronics   Manufacturing							·	0.2
	Total CAD/CAM		0.0		0.0		0; 	_ <b>_</b> .	8. 
L026	DT Data Communications Watwork	- 	1.3	<b>-</b>	6.5	<b>.</b> 	1.0	 	 
		. 4							
			0					IF EXHIBIT ACP-1	IT ACP-

Page 2 of 5

SPACE AND MANAL WARPARE RESEARCH AND DEVELOPMENT CENTERS
DEPARTMENT OF THE MANY
MANY INDUSTRIAL FUND
INDUSTRIAL FUND ASSET CAPITALIZATION PROGRAM
FY 1990/FY 1991 PRESIDENT'S BIRMHIAL BUDGEY
(Dollers in Millions)

		FY	FY 1988	FY	FY 1989	7.4	FY 1990	FY	FY 1991
Line	l Item	_	Total	_	Total	_	Total	_	Total
Number	Description	Quant	Cost	Quant	Cost	Quant	Cost	Quant	Cost
L027	   Scientific Computer Facility					7	1.4		
L028	Communication System Upgrade	·	1.8	e4	0.7		1.5		<b>8</b> .0
L029	CL VI Supercomputer				7.8	·	2.6		
T030	Communications Systems Network	·	2.4						
L031	   Fylable Raster Symbol Generator			- 	9.0				
L032	   High Speed Simulator Computer				9.0				
L033	System Engineering Integration   Facility				1.6	:	4.	·	9.0
L034	Advanced Technology Computer   Racility				9.0				
L035	   CME Torpedo Hydrodynamic Computer					- 	9.0		
7036	   Torpedo Defense Engagement Model								0.7
L037	CME Signal Analysis System		- <del>-</del> -					- 	9.
L038	Computer System				<b>8</b> .0				
L039	   Computer Upgrade		0.3	-	7.0				
L040	Computer System			<b>-</b>	9.0				

IF EXHIBIT ACP-1
Page 3 of 5

## SPACE AND MAYAL WORFARE RESEARCH AND DEVELOPMENT CENTERS DEPARTMENT OF THE MAY MANY IMPUSTALAL FUND IMPUSTALAL FUND ASSET CAPITALIZATION PROGRAM FT 1990/FT 1991 PRESIDENT'S BIRMMIAL BUDGET (Dollars in Millions)

		Y.	FY 1988	FY	FY 1989	FY	FY 1990	L.	FY 1991
Line	Item	_	Total		Total	_	Total	_	Total
Number	Description	Quant	Cost	Quant	Cost	Quant	Cost	Quant	Cost
L041	Super Computer System and Upgrade						5.0		1.5
L042	   Mini-Supercomputer 2					~ 	8:0		
L043	Office Automation					·	1.0		
L044	Adv. Sub Tech Oper Automation			7	0.5	m 	6.6	m 	- 0.2
L045	Super Computer Additions								1 2.0
£046	SEE Mass Storage Expansion	<b>-</b>			6.0		s.o -	<b>.</b>	- <b>-</b> -
L047	SEE Expand Extended Memory			ra	5.0				
L048	Minicomputer Replacement			ın	2.0				
L049	S.E. C.D.C. 990		3.9		1.2			_ <b>_</b> .	
0507	Mini-Supercomputer						9.0		
1507	Advanced CPU	- <b>-</b> -			<b>-</b>	- <del>-</del> -	9.0	- <b>-</b> -	
L052	SEE ADD CPU System				_ <b>_</b> .		8:0		
L053	Advanced Arithmetic Processor						6.0	- <b>-</b> .	
L054	NOA Minicomputers						1.0	~	1:0
L055	SEE Follow-on Major System		- <b>-</b> .						3.5
			224					IF EXHIBIT ACP-1 Page 4 of 5	IT ACP-

SPACE AND HAVAL MARPARE RESEARCH AND DEVELOPMENT CENTERS DEPARTMENT OF THE MAY. MANY INDUSTRIAL PURD
INDUSTRIAL PURD ASSET CAPITALIZATION PROGRAM
PT 1990/FT 1991 PRESIDENT'S REMITAL BUDGET
(Dollars in Millions)

		Y.	FY 1988	FY	FY 1989	FY	FY 1990	F.Y.	FY 1991
Lin.	Item		Total	_	Total	_	Total		Total
Number	Description	Quent		Quant	Cost	Quant	Cost	Quant	Cost
1056	SEE Data Base Mach								0.0
L057	ACQ System	<b>-</b>	8.0	·	. o				
1058	Advanced Real Time Stimulator						9.6		
6507	Knowledge Based Systems		• •		6.0	·	6.0	·	
1060	Video Teleconferencing				<b>.</b>		9.0	·	9.0
1907	Hardware TestBed						9.0	·	
1062	Computer Complex Upgrade	~ — •	~	<b>-</b>	~	~ <b>-</b> .		~	0:1
1063	Disk Subsystem			<b>-</b>				~	1.2
1064	Database Support								1.0
	Total Major ADP EQ Systems	<del>-</del>	1 10.8		19.6		20.4		1 15.6
1065	other Eq Under \$1M		0.69		38.6		1 22.2	<b>.</b>	30.1
9907	Minor Construction		9.0		12.2		1 14.4	~ — •	14.8
L067	Management Information Systems		1 16.7		o. o.		0.0	- <del>-</del> -	
	Total ACP		1113.0		1 78.9		75.6		0.67
						1			
			225	İ				IF EXHIBIT ACP-1	of 5

This platform is ocean-moored and will provide a unique, over-the-sea test range, to be used for design, test, and evaluation for existing and new electromagnetic and electro optical submarine sensors. This facility will bridge the gap between laboratory test ranges and actual submarine testing. It shall also reduce the reliance on submarine services for technical/development festing.

Without this facility the Center will have to continue to rely on special submarine services to support development programs. Also, critical detection measurements are not possible without badditional support (surface/air) which is very costly. However, with this platform accurate measurements (i.e., near surface multi path effects) can be made thereby optimizing antenna development. This facility will result in a substantial cost avoidance to the Navy (more than \$500K annually) by dramatically reducing the need for special (test) modifications to Fleet submarines and at-scantest supports.

		ASSE	ASSET CAPITALIBATION PROBOW JUSTIFICATION SHEET	Seed fort	NA JUSTIFIC	CATION SHEET		 	\ -	A. DIRGET SUBMISSION	Витери	-
			(0.11)	(Exilars in Thousands)	ous <b>an</b> ds)				:: - -	10001	FT 1990/1991 BIENNIAL	METAL
B. Industrial Fundakti   NIF/SPAWAR R&D (	CENTE	CENTERS/DAVI	CENTERS/DAVID TAYLOR RESEARCH CENTER	R RES.	EARCH CI	ENTER!	ACT-1 LA 1,006	LAPGE CA	LOOS LAPER CAVITATION CHARNEL (LCC) ENGINEERING EQUIPMENT	CHANN	EL (LCC)	
		SebI 2	5.		الله 1989 الله 1989	989		F 12.0			1001	
ELEMENTS OF COST   Quantity   Unit Cost   Total Cost   Quantity   Unit Cost   Total Cost   Total Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Progl Cost   Pro	uantity G	nit Cost	Total Cost	Cuantaty	Unit Cost	Total Cont	Crant 1'Y	1701 (054	Total Cost	Quanta ty	Unit Cost	Total Cost
Dynamometry		, 500	3,500   3,500		12,000	2,000 12,000		100	100		150	150
Data Acquisition	 0	· – -			1,400	1,400	 	1 560	1 560		100 1	100
Laser Doppler Light & Photo Other					290	290		1 400 11,140	, 400   1,140		1,500 1	1,500 1
TOTALS		 	3,500			5,500			2,200			2,000

The Large Cavitation Channel (LCC) provides the test capability to support the maritime strategy in surface warfare and submarine design. The LCC provides the controlled test chamber in which to conduct test of ship and submarine models much as a wind tunnel does for aeronautical model testing. The LCC is presently being fabricated at a Navy leased building located in Memphis, renessee. The facility is expected to become operational in July 1990. This ACP item Record to broome operational in July 1990. This ACP item LCC and is needed to support measurements of hydrodynamic and hydroacoustic parameters for the prediction of full-scale performance from model tests. These ACP funds provide the equipment used to actually make the measurement and observation on the ship and submarine models being tested. Without this ACP equipment, the essential hydrodynamic and hydroacoustic measurements cannot be made and the benefits of the Navy's investment in the LCC itself would be unrealized and this will limit our capability to make improvements to our ships and submarines and solve new class design problems design stage have cost the Navy millions of dollars in degraded operational capability, repairs, redesign and additional testing.

		<b>9</b>	ET CANTALLE.	AGST CAPITALIZATION PROGRAM JUSTIFICATION SHELT (Collers in Thousands)	JUSTIFICAN	TION SHEET			₹ <u>}</u>	A. BUIGET SUBMISSION	1551OM	
B. Industrial Fund/Activity Group/Activity NIF/SPAWAR R&D CENTERS/NAVAL CENTE	D CENT	Group/Activity FERS/NAVAL L CENTER	AL UNDEF	CENTERS/NAVAL UNDERWATER SYSTEMS CENTERS/NAVAL UNDERWATER SYSTEMS CENTER	STEMS		AG-1 Lur L007	SUBMARII	ME HIGH-	C. ACT-1 Line 10. 1 Item Description LOO7 SUBMARINE HIGH-SPEED LAUNCH FACILITY	UNCH F	ACILITY
		r 1988	93		rr 1989			FT 1990			looi 14	
ELECTRICS OF COST   Que	Quantity	Unit Cost	Total Cost	ntity Unit Cost   Total Cost   Quantity   Unit Cost   Total Cost   Quantity   Unit Cost   Total Cost   Total Cost	ut Cost	Total Cost	  Quantity	Unit Cost	Total Cost	Quantaty Un	nt Cost	Total Cost
Fabricate Tow Mechanish		136	136			•		1,095 1,095	1,095			
Installation				 						<b></b>		1,250
			<b></b>	~ <b>-</b>		-						
						- •				· <b>-</b> ·		

The Launcher Building was built with a 450,000 gallon tank, ready for design and installation of A High-Speed Launch Facility (HSLF). The design has been completed and the Center is progressing with fabrication and installation. This facility will contain a submerged model of a submarine and will be capable of launching 1/7-scale torpedoes and missiles from vertical tube, bow tube, and canted tube locations. This tank was designed specifically to test launch from submerged submarine models.

Overall annual cost avoidance is expected to be approximately \$180K resulting from savings in personnel time and travel and by avoidance of expenses for facilities and equipment rental.

			ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	TALLET	TON FROM	M JUST	ITICATIC	S SIEET			- Y	A. BITGET SUBILISION	JENESS TON		1-
				(Bolla	(Dollers in Thousands)	(spursn						10601	FT 1290/1991 BIERRIAL	EHHIAL	
B. Industrial Fund/Activity Group/Activity	/Activity	Group/Act	ivity					-	ACP-1 Li	ne No. 6 It	C. ACP-1 Line No. 6 Item Description				1 -
HIF/SPAWAR RED CE	D CENT	ENTERS/NAVAL AIR DEVELOPMENT CENTER	NAL A	IR DE	VELOP	MENT	CENT	ER	L008	POSITIC	LOOR POSITIONER FULL SCALE	, SCALE			
		r	FF 1988			t	r 1989	<u> </u>	 	nee1 23	3		lúoi L		1 <b>–</b> -
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The item to be procured is a heavy duty electromechanical three axis positioner which will replace the existing two axis positioner at the NAVAIRDEVCEN Full Scale Antenna Range Facility. The positioner will be used to orient the azimuth and elevation angle of test aircraft during an exercise aircraft during and system performance tests. The positioner, mounted forty feet in the air on a specially designed structure, allows ground testing of full scale aircraft with more accuracy and cosiderably less cost than flight testing. The replacement is required because of wear on the existing positioner, a high failure rate generating excessive down time, the need for the third axis to provide realistic geometries for in flight simulated tests, and to ensure sufficient safety factor for the aircraft and installed equipment. The existing facility as currently operated costs approximately \$250 per hour to collect essential installed antenna performance data as opposed to typical flight testing at \$1500 per hour. The facility has been in operation approximately 10 years with the existing positioner and the associated down time has increased operating costs in the past year. The replacement positioner will provide more accurate flight simulation (three vs two axiss of rotation) and thus be able to be used in support of a large number of programs such as F/A-18, EA-6B upgrades, various Electronic Warfare programs, and installed pod measurements.

1 6. Industrial Pund/Activity Group/Activity NIF/SPAWAR R&D CENTERS/NAVAL AIR DEVELOPMENT CENTER				-		
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NIF/SPAWAR RED CENTERS/NAVA	· ty	-	. ACP-1 Lans	C. ACP-1 Lane No. 4 Item Description	8	
	NL AIR DEVELOPMI	ENT CENTER!	T009 11	IIGH ACCURACY	L009 HIGH ACCURACY 2500 LB SCORSBY	
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The advent of more sophisticated navigation equipment (such as strapdown systems) has placed more importance on the requirements for comparing actual ship's motions to those sensed by the havigation system (or stable element). The Navy's plan to utilize Ring Laser Gyro (RLG) strapdown navigation equipment for future submarine applications, vice the present qimballed systems, has generated a need to evaluate the strapdown equipment's ability to provide accurate real time attitude (roll, pitch and heading) information under ship dynamic operating conditions. Accurate real time attitude information is required to align various submarine weapon system such as TOMAHAWK and TRIDENT missile systems.

The actual ship's motion is the motion imparted by the test platform (in the laboratory, a Scorsby). Measurements of the dynamic roll, pitch and yaw motion of systems having 2500 pounds of capacity need an accuracy of 3-15 arc seconds to meet submarine requirements (presently used scorsby his in the order of 2-10 arc minutes). The proposed Scorsby has extremely accurate sensing devices (inductosyns) installed to measure dynamic attitude motions. This Scorsby with lits associated peripheral equipment will be capable of dynamically measuring, comparing, and logging attitude data to an acuracy of 3-15 arc seconds.

Without the High Accuracy 2500 pound Scorsby, the development of the required navigation system reapabilities to meet future missile system requirements and submarine schedules will be severely impacted. Systems will be installed without R&D laboratory testing, which would result in the need to develop engineering change revisions to correct deficiencies normally resolved by laboratory testing. These engineering changes could result in multi million dollar costs to provide necessary software, hardware and documentation changes for each production and fleet installed system

B. Industrial Fund/Activity Group/Activity	ACD-1 Lane Wo. & Item (wactpilled
F/SPAWAR RED CENTERS/NAVAL WEAPONS CENTER   L010	IHPRARED IMAGING RADIOMETER
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Advanced technologies utilized in the development of new weapons systems (such Advanced technologies utilized in the development for the capability to effective AIM-9R) have generated a corresponding demand for the capability to effective performance of those systems by collecting and analyzing high resoultion image performance of those systems by collecting and analyzing firstole, has engage the Naval Weapons Center (NAVWPNCEN), in addressing its RDTÆE role, has engage the Raval Weapons Center (Itis capabilities for high quality electro-optical (EO) measuressential part of this overall effort is the procurement of an advanced imagin proposed acquisition will provide the capability proceed to support new threat proposed acquisition will provide the capability needed to support new threat proposed acquisition will not be provided with high quality threat and target data weapons prooptams will not be provided with high quality threat and target data weapons proporans will be done using "best quens observable weapons systems will be done using "best quens observable weapons systems will be done using "best quens validations by data of lesser quality than the weapons they represent.	capability to effectively measure the capability to effectively measure the formandly and high resoultion images. Consequently, sectro-optical (EO) measurement. An ent of an advanced imaging radiometer. The calibrated image radiometry. The ed to support new threat measurements, ton and development. Without this il be significant. Advanced technology ty threat and target data required for and target data required for and target data required for and vulnerability studies of both soling "best quess" information from sling simulations will be based on they represent.

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The microelectronics technology base is continually changing, with breakthroughs in speed and complexity. Rapid advances in semiconductor manufacturing mandates the necessity for a high speed, high pin count test system. VLSI performance is only of value if one can harness it in a test program quickly and easily. The rapid changes in device technology demand an approach to test program quickly and easily. The rapid changes in device technology demand an approach to test software for complex process testing and device debugging. The desired high speed tester will be capable of 40Mhz functional testing with DC and AC parametric test capability. It will measurement unit, and digital-to-analog converters for voltage and current levels. This tester will replace a 15 year old system which cannot meet the performance conditions for device testing presently being tasked to the Center. This tester will enable the Center to test high speed, high prin count devices that are being fabricated for use in DOD systems. It will also enhance the capability to test, retest devices being stored in the Defense Electronics Supply Center stores. Without the direct interface of the tester to the on-site computer-aided design system, it would be almost impossible to generate the function statements necessary for testing and debugging Large Scale Integrated Devices.

'Fleet support and development of advanced radiation hardened silicon integrated circuit for DOD weapon and communications systems, would be seriously delayed without an adequate test system. Failure to obtain a high speed, high pin count test system will jeopardize current and future commitments for DOD semiconductor requirements.

Bereative Justification:

Microlectronics laboratory at NOSC is currently developing advanced circuit designs which employ very thin film processes. Such devices operate at higher speeds and are less sensitive to radiation damage than conventional microchips. To utilize the advantages of these thin-film designs, the lateral dimensions of the circuitry must be reduced proportionately. This requires the capability to preclude optical images on the semiconductor surface with features less than one micron wide. The scanning projection aligner currently in use is limited to features no smaller than two microns.

Most of the developments currently underway in the microelectronics industry are based on use of reduction stepper aligners. These steppers can presently produce patterns with features of less than one micron size, approaching one-half micron in some cases. In addition to allowing many more devices in a given area of the chip, steppers provide several other advantages compared to a projection scanner. Steppers operate by reducing the image from an enlarged pattern on a glass projection. The reticle contains fewer, larger patterns, than the mask for a scanner aligner. Thus it is easier to produce a defect-free reticle compared to a real-size IX mask used by a scanner. As a result, the yield of usable die on the finished wafer can be much higher for steppers than for scanners. Also, steppers meet the radiation requirements for not inducing damage into a silicon-like E-Beam direct-write photolitho system.

Another advantage of steppers is their versatility. They can be programmed to put several different devices' variations on a single wafer, resulting in a great savings in both materials and process development time. If NOSC is to maintain a capability within the Navy to produce the advanced radiation hardened microcircuits needed by sophisticated weapon systems, it is essential that the process equipment be at the state-of-the-art.

(Dollars in Thousands)  B. Industrial Pund/Activity Group/Activity  NIF/SPANAR RED CENTERS/NAVAL OCEAN SYSTEMS CENTER	(Dollers in Thousands) CEAN SYSTEMS CE	CENTER 1 C.	ACT-1 Line LO13 S	C. ACT-1 Lame No. 6 Item Description LO13 SELECTIVE TUNGSTEN EPITAXIAL SYSTEM	TEV 199	FY 1990/1991 BIEHHIAL ption  NGSTEN EPITAXIAL SYSTEM  I FT 1991	SYSTEM
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the Microelectronics laboratory of NOSC has developed advanced silicon integrated circuit technology which has significant potential for extremely high speed, high packing density electronics. In particular, the ultrathin silicide to sapphire (STS) technology has the potential for up to 10 million logic gates per chip in the 1990's. Such complex integrated circuits demand corresponding complex interconnections, and conventional interconnection technologies will not suffice for STS. Therefore, novel processing techniques must be developed in order to take advantage of the demonstrated potential of STS.

The high density of interconnections will certainly place demands to increase from one or two levels of metalization to three or more. Such processes can only be produced reliably if they are inherently planar. One of the most promising developments in planarized metalization is selective deposition of tungsten. This technique is based on the unique property of tungsten that at specific temperatures and pressures, tungsten will deposit selectively on silicon and not on silicon dioxide. This permits selective filling of contact holes, creating a vertical metal interconnection with a surface planar to a silicon dioxide insulating layer. If this process could be perfected and shown to be applicable to modern integrated circuit manufacture, the three or more levels of interconnections can be fabricated.

In order to develop this process, and specifically to develop it for ultrathin STS, a selective rungsten deposition system must be purchased and installed at MOSC. Once installed, the process development can proceed and can then be transferred to the semiconductor industrial base of the country

Installation of this equipment will significantly reduce development costs and lead times for jadvanced integrated circuits by permitting use of the STS technology and providing circuit designers with increased flexibility due to extra metal layers. Without this equipment, much more complex processes will have to be developed in order to interconnect the advanced ICs and way systems of the future will be limited to less poserful technologies.

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the laborator	yare	subject	to part	icle co	ntaminat	ion whi	ch lea	d to lower w	es currentiy used afer vields, Adva	Sed in Advances

Advances in furnace design have significantly reduced this problem.

Installation of these diffusion furnaces will allow NOSC to fabricate complex integrated circuits ipresently beyond the capability of the laboratory. Purchase of this equipment will result in cost savings to the Government by 1) developing and producing advanced havy devices not peconomically feasible for commercial laboratories to fabricate; 2) providing Navy scientist and engineers with a working knowledge of state-of-the-art processing in order to monitor and provide technical advice to Navy contractors; 3) allowing processing to occur in house which in turn insures the integrity of the devices; 4) increasing device yield.

A. Putal Supplication	117 1990/1991 BIESSIAL	the twentytion	R SIGNAL SIMULATOR		Unit Cost   Total Cost   Cost   Total Cost		21	1,521	 SWC must use test devices to st, which is crucial to insure ons of EW systems have been and g support. NSWC will not be able rator.  Digital simulators are nerating systems. The digital sing characteristics of an EW nna, receiver and digital requency (RF) signals.  The present RF testing capability multaneously. To provide add with many independent, complex a with the requested acquisition. laws or peculiarities become become	an RF generating system. Since the hat a real environment would provide, there simulator and the EW systems which are lesign, development and maintenance. Use of led digital simulators which would
ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEAT (Dollars in Thousands)		C. ACP-1 Line No. 4 Item Processes	SURFACE WARFARE CENTER LOIS RADAR	FY 1989	Total Cost (Mantity)				lopment and planned product imp To meet this reponsibility, in a undergoing development and te as required at sea. New versiblivered to NSWC for continuinhe requested radar signal gene lation for most test purposes. In comparable radio frequency genever, the full signal processive system, including the antellating the system with radio for will fill a critical need. Few signals can be produced signation environment must be crowest environment can be provided signal signals.	enefit comes from the generic nature of an RF generating system. Since the oducing RF signals, which are exactly what a real environment would provide, special digital interfaces between the simulator and the EW systems which are. Using RF avoids costs in interface design, development and maintenance. avoids acquisition of specially designed digital simulators which would
Mart Caritaliza		8. Industrial Fund/Activity Group/Activity	NIF/SPAWAR R&D CENTERS/NAVAL SURI	1988	ELECTRIS OF COST  Quantity  Unit Cost   Total Cost  Quantity  Unit Cost	Radar Signal	Installatioh	TOTAL	NSWC is responsible for the devel Electronic Warfare (EW) systems. Simulate the EW systems which are that the EW systems will perform are being developed and will be to provide full support without to provide full support without to provide full support without to provide full support without to currently, NSWC uses digital simul substantially less expensive than substantially less expensive than substantially less expensive than substantially seen when the ent processing, are combined by stimul processing, are combined by stimul at NSWC is very limited. Only a realistic scenarios, the RF simul signals. This dense, realistic than the Stark incident in the Pers	An additional benefit comes from simulator is producing RF signals is no need for special digital in being simulated. Using RF avoids an RF simulator avoids acquisitio

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otherwise be needed for testing new or modified versions of EW systems. Digital simulators with scenario capability cost about \$300K to \$500K. Digital interfacing to a specific EW system or modifying a digital interface for a modified EW system costs from \$50K to \$150K. Recurring costs such as this can be avoided when a scenario-capable RF signal generator system is used.

The EW system test process also expands the way tests can be conducted. EW scenarios using digital stimulators are not realistic when attempting to test more than one EW system simultaneously. Precise geometries and signal timing are very difficult to provide in digital simulations on multiple EW systems. But, testing multiple systems, especially for data integration purposes, using RF radiation provides a perfect simulation of an actual EW

The proposed acquisition will save approximately \$30K per year in avoided cost increases which would result from continuing use of digital simulators. Primarily the savings come from avoiding increased contracting requirements for engineering support for test set up and equipment incerfacing and not having to buy numerous digital simulators.

Money will be saved, increased use of contractors will be avoided, but the essential justification for the RF simulator is to insure that the fleet is given EW systems which function in real tactical environments.

ATION PROGRAM.  Jees in Thousa.  FACE WARF.  JOURNITY! Unit	ty Group/Activity  CENTERS/NAVAL SUR  T 1988  T 1988  H	ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHELT  ( Dollars in Thousands)	C. ACP-1 Line No. 6 Stee Description	CENTERS/NAVAL SURFACE WARFARE CENTER LOIG WIND TUNNEL-T9 DRIVER VESSELS	Inex 1883   14 14 14 14 14 14 14 14 14 14 14 14 14	ELECTIVES OF COST   Quantity   Unit Cost   Total Cost   Quantity   Unit Cost   Order   Total Cost   Order   Quantity   Unit Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Tota	1 1,500 1,500 1,500 1,500
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The NSWC Hypervelocity Tunnel 9 is a national asset to the DOD aero-testing community. Although Tunnel 9 is a Navy test facility, it has been used for many Army, Air Force, and NASA sponsored programs. Tunnel 9 has played significant roles in the development of the MK II Reentry Body, the High Endo-atmospheric Defense Interceptor (HEDI) of the SDI program, NASA's space shuttle program, and most recently has contributed to the aerodynamics of high speed inlets of the NASP (National Aerospace Plan) program.

Tunnel 9's capabilities are testing at Mach 10 with a Reynolds Number up to 20 million, Mach 14 with a Reynolds Number up to 4 million. In addition to these capabilities, what really makes the tunnel unique is the large test cell (5 ft diameter 2 of ft long). This allows testing of full scale missiles and reentry bodies thus eliminating any scale down problems. The MSWC Hypervelocity Wind Tunnel No. 9 operates at high pressures and temperatures providing Mach 10 and of the wind tunnel has three large pressure containment vessels and one large heater vessels which is used to heat the nitrogen gas used in wind tunnel runs. These Driver Vessels have a finite fat expectancy. It is necessary to start replacement purchasing and manufacturing processes life expectancy. It is necessary to start replacement purchasing and manufacturing processes vessels in T9 based on safety considerations associated with predicted fatigue life. If Tunnel 9's operating capabilities have to be scaled down due to the fatigue life in it's high pressure vessels, existing and future Navy, Army, Air Force, and NASP aero-developmental testing programs.

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ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET	TION PRO	GRAM JUS	STIPICAT	TON SHEET				A. B.	BUDGET SUBMISSION	MISSION		
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			}					1	BIENNIAL			
B. Industrial Fund/Activity Group/Activity	/Activit	·			-	C. ACP-1 Line No. & Item Description	ine No.	f Item	Descripts	Ton		
HIP/SPANAR RED CENTERS/NAVAL SURFACE WARFARE CENTER	URFACE W	ARFARE (	ENTER		_ ~ .	2017 - 1	ful tısən	sor Int	L017 - Multisensor Integration Equipment	Equipme	ŧ	
		FY 1966			FY 1989			FY 1990			FY 1991	
	-	Unit	Unit   Total	-	Unit	Unit   Total		Unit	Unit   Total	]_	Unit   Total	Total
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Forward Looking Infra-Red (FLIR)	_	_	_	-	580	280	_	_		_	_	
High Power Signal Generator	_	_	_	_	_	_	~	920	950	_	_	
Automatic Video Tracker	_	_	_	_	_	_	~	540	540	_	_	
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experience suggests that a multiple sensor approach offers promising technique for detecting and tracking these threats. NSWC focuses ADTLE efforts on developing innovative technical solutions to gain synergism between sensors. NSWC's

high speed targets with gun projectiles. The multisensor integration support equipment requested will augment the existing anticipated that these new assets will augment the gun range by backing up the present range instrumentation and providing One of the primary reasons for choosing this location was the ability to simulate low cross-section integrated multisensor self defense system. MSWC is establishing a multisensor integration test site on its Potomac River range assets and provide the added capability to carry out RDTsE experiments with current manning levels. It is also In order to conduct the technology demonstrations and critical experiments, which support the development of an additional safety surveillance. Maval Gun Test Range.

program, the foreign Wespons Evaluation program, the Surface Launched Wesponry Exploratory Development Block and several The multimensor integration test site is expected to provide support for the MATO AAM program, the CIWS improvement smaller sensor projects.

Specific equipment items include the following:

a viable option for defending against low elevation/low observable threats as an adjunct to advanced rader systems. The Forward Looking Infra-Red (FLIR) system is a fundamental IR measurement system which will be used to develop specifications for future IR sensors and to assist in the test and evaluation of these devices. IR sensors are

Page 1 of 2

	ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	ALIZATION PROGRAM JUST (Dollars in Thousands)	GRAM JUS	STIFICAT:	TON SHEET				A. 80	A. BUDGET SUBMISSION PY 1990/1991 PRESIDENT'S	MISSION 91 PRES	I DENT'S		
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L017 MULTISENSOR INTEGRATIN EQUIPMENT (CONTINUED)

The High Power Signal Generator will provide the relatively low cost capability to evaluate radar waveform designs in a generators and modulators followed by intermediate power amplifiers of the 1 kw class. This will permit low power concept development tests to be performed economically without hardware development costs. Full power follow-on experiments can maritime environment. It will perform the function of radar brassboard using fully flexible laboratory grade signal then be performed with existing power amplifier and antenne assets. The Automatic Video Tracker is a dual purpose device. It will provide precision angle track of targets as a source of "ground truth" in support of sensor development. It will also serve as a generic brassboard tracking subsystem for a wide variety of infra-red and EO sensors. This will permit focusing development efforts on the sensor without dilution of resources on the parallel development of auxiliary subsystems.

the Ballistic Instrumentation Radar (AN/MPQ-63 or equivalent), a proven state of the art device performing its function combined high range resolution and high doppler resolution will give a capability to monitor a wide variety of surface and at YUMA Proving Ground, is appropriate for support of standard naval gun and functions testing. In addition, the radar's techniques can also be evaluated in real time. If the Navy achieves only 10 percent of the Army's estimated savings, the air-launched devices such as decoys, bombs, mines and submunition rounds. Various debris screening and kill assessment acquisition cost would be recovered within two years.

ANTION PROGRAM JUSTIFICATION SHELT  Lets in Thousands!    VY 1990/1991 BIEHHIAL	WATER SYSTEMS 1 C. A.T-1 LING 13. 1 110 LOUN COMMUNICATION SYSTEM	1601 L L 1686 L L L L L L L L L L L L L L L L L L	Cuantity   that Cost   Total Cost   Cuantity   that Cost   Tital Cost   Quantity   Unit Cost   Total Cost	1 1,100 1,100	be supported: 1. Perform in parallel and as close to real time rmation and display processing using land based resources. This and demonstration of advanced concepts and their incorporation into me than previously, thus at a cost savings. 2. Allow real time ed site while a ship is on patrol. This would speed up NUSC's repuid delivery of software system upgrades to ships anywhere in pability to troubleshoot system problems from a land based performance and providing prompt feedback to the ship on possible lab to address operability issues in real time. 4. Provide ngle ship or battle group tactical operations while deployed.
ASSET CAPITALIZATION FPOTMAN JUSTIFICATION SHELT (Dollars in Thousands)	SYSTEMS   c.	1989	Total Cost   Chantity	1 1,10	will be supported: 1. Perform in painformation and display processing using and demonstration of advanced concestance than previously, thus at a cost based site while a ship is on patrol for rapid delivery of software system of capability to troubleshoot system patem performance and providing prompt the lab to address operability issuer single ship or battle group tactical
ASSET CAPITAL	B. Industrial Pundactivity Group/activity NIF/SPAWAR R&D CENTERS/NAVAL UNDERWATER CENTER	1 77 1988	ELECTRIC OF COST   Quantity   Unit Cost   Total C	Satellite System	Marrative Justification:   Interfollowing capabilities will be support of allowing capabilities will be support of allowing rapid prototyping and demonstance in a shorter time frame than precording of data at a land based site preaction time to problems encountered by a life cycle by: a) allowing for rapid define world, b) providing the capability facility, c) monitoring system performe problems, and d) allowing the lab to simulated sonar training for single ship

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Chamber test facility will permit the complete performance characterizat ommunication, navigation and electronic warfare antonnas over a frequency GHZ. Antennas, developed by NUSC and by Navy contractors, will be teste effects due to site constraints of the submarine configuration. This factering of newly developed antennas and allow operational effectiveness of for specific submarine missions.	nstrumentatiþn	ity   Unit Cost   Total Cos	t Suntity]	imit Cost   Tota	145	Quantity Unit Cost	Total	1	5	Total Co
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Chamber test facility will permit the complete performance char ommunication, navigation and electronic warfare antennas over a GHZ. Antennas, developed by NUSC and by Navy contractors, will effects due to determine radiation patterns, gain, phase and i effects due to site constraints of the submarine configuration. testing of newly developed antennas and allow operational effect for specific submarine missions.			<u>-</u> -	<b>-</b> -						
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A major aspect of the Navy's defensive and offensive capability resides within its air weapons systems. Key to the mission of the Naval Weapons Center is the ability to develop and measure the effectiveness of new generations of imaging missile systems.

The planned acquisition will generate target and backgrond images in real-time for use in hardware-in-the-loop simulation and evaluation of imaging infrared guidance systems. To develop and test these new tactical missile guidance systems, property banded target and background images must be generated and presented dynamically and in real-time. The computer image generation capability resulting from this acquisition will enable the test engineer to properly control an increasingly complex test environment while gathering required data through accurately repeated test simulations.

Without full and complete simulations, the only alternative will be more extensive use of captive flight test and live missile firings. Both are costly and do not provide the test engineer with the control over the environment needed to isolate and evaluate specific technical problems. The expense of flight operations serves as the focal point of the economic analysis for this project. Cost avoidance associated with replacing flight tests with simulation conducted on this system will enable the navy to avoid \$740 thousand per year during the 10-year expected useful life of the hardware.

	ASSET CAPITALIZAN	ASSET CAPITALIZATION PROJUM JUSTIFICATION SHEET	-	A. BUTGET SURMESSION
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B. Industrial Fund.  NIF/SPAWAR R&  	B. Industrial Pund/Activity Group/Activity   NIF/SPAWAR R&D CENTERS/NAVAL WEAPONS CENTER 		C. AT-1 Line No. 4 Ites Execuption LO22 P-369 MILITARY CONSTRUCTION COLLATERAL EQUIPMENT	CONSTRUCTION
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These procurements will provide the collateral equipment required to complete the fully useable Missile Engagement Simulation Arena (MESA), Military Construction Project P-169. The design for the project is complete and the construction start is programmed for FY 1990.

MESA will support the development of the anti-air weapons critical to the defense of U.S. military forces and their ability to project force. Without MESA, the United States would be severly handicapped in its ability to develop missile fuzes needed to counter reduced observable stradar) althour threats. Without MESA, the Naval Weapons Center, the Navy's primary Center for the development of anti-air weapons, would be limited in its capabilities to develop guidance subsystems needed to counter these same threats.

This equipment will measure the performance of advanced technologies while still in the design and prototype phases and assess the effectiveness of improvements in current systems to counter the advanced threats. It will also control background clutter for measurements against low radar cross-section threats and assess the effectiveness of foreign military systems against U.S. aircraft and missiles.

Cost reductions associated with the acquisition of the collateral equipment itself is not significant (\$80 thousand per year over the 20-year expected useful life). However, appropriate puffilling of the MESA facility will provide the critical technical capability that does not exist elsewhere in the free world, a facility capable of satisfying the essential fuze testing requirements described above.

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET  (Dollars in Thousands)  (FY 1990/1991 BIENNIAL	ity Group/Activity   C. ACP-1 Line No. 4 Item Description	(#D CENTERS/DAVID TAYLOR RESEARCH CENTER   L023 CAEDOS - HEXT GENERATION SYSTEMS	1 1601 L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640   L. 1640	Quantity Unit Cost   Total Cost   Quantity   Unit Cost   Total Cost   Quantity   Unit Cost   Total Cost   Total Cost   Total Cost	2   200   400		a computer-based engineering and design facility that was begun 8 years ago under a Camputer Aided Engineering and Documentation System) program. This system ely modernized the total engineering design process by replacing traditional design lator and drafting board) with computer terminals and sophisticated design software. Iginal CAEDOS equipment has served us well, the "Next Generation" of Computer Aided Computer Aided Design (CAE/CAD) systems are needed to improve processing speed and keep pace with the increasing volume and technical complexity of today's engineering he new systems will also be better suited to support the increased need for secure the Center made a large leap in engineering effectiveness and efficiency when CAEDOS ed. With these procurements, DTRC is ensuring that we maintain a modern capability.
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			<b>.</b>			_	NO-LE	ne No. 4 Item	C. ACP-1 Line No. 5 Item Description			
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David Taylor Research Center has introduced a number of automated capabilities to enhance its mission activities. These capabilities include high speed processors, enhanced computer Aided Engineering devices, test and measurement equipment, sensors, video equipment, and workstations for support beth engineering and administrative activities. Many of these resources are utilized and other engineering and scientific applications. Implementation processes, test and evaluations, high-speed interconnection in order to support the sharing of information and programs among various projects within the center. Thus, there is a requirement for data communications with sufficient capabilities to take advantage of the installed state-of-the-art technology. Currently, an extensive telephone system is being utilized to support the center's data communications requirements. While these existing capabilities provide basic communications requirements. While these existing capabilities provide basic communications requirements. While these existing capabilities provide basic communications speed or service to meet current requirements of the current system is sophisticated installed equipment base at the center, plus the cost of the current system is sophisticated installed equipment base at the center, plus the cost of the current system is communications speed or service to meet current requirements. With the installation of a state-of-the art high speed communications system, the communication speed would increase from the two required to add to 9600 band and eliminate the annual two million dollars in communications costs and permit future expansion while reducing costs and allowing the attainment of equipment standardization. Payback of costs would be attained within three (3) years.

	ASSET CAPITALIZA (Doll)	ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Pollers in Thousands)	Y	A. BUTGET SUBMISSION FY 1990/1901 PYENNYLY
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   Marrative Justification:	:		A	
The equipment : capacity of the engineering con does reach 100 analysis (especy Without additic	is to provide an incomputer or apputational facility percent during peak jally structural), is all computational can	The equipment is to provide an incremental addition to the current general purpose computational capacity of the central computer complex at NUSC. The current general purpose scientific and engineering computational facility is approaching saturation of central processor utilization and chose reach 100 percent during peak usage periods. Workload increases are expected in engineering analysis (especially structural), interactive graphics, data bases, and project management. Without additional computational capacity, the quality and availability of computer services.	the current general purcurrent general purpor ation of central proce load increases are exi data bases, and proje	urpose computational se scientific and essor utilization and pected in engineering ect management.

Without additional computational capacity, the quality and availability of computer services to the amany project users will substantially degrade and for some purposes become unacceptable. The boily alternative to increase capacity would be the rental of additional similar equipment, which is projected to cost \$200,000 annually based on GSA schedules. The planned augmentation to be purchased is projected to cost approximately \$140,000 per year in maintenance and depreciation (8 year nominal life). An annual savings of \$80,000 in operating costs is expected overall.

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B. Industrial Fund/Activity Group/Activity	1/Activity	Group/Activ	1ty			ن -	Nr1 L	ine Ho. 6 Ite	C. ACP-1 Line No. 6 Item Description			
NIF/SPAWAR R&D CENTERS/NAVAL WEAPONS CENTER	SD CEN	TERS/NAV	AL WEAPO	NS CEN	ITER		L028	COUMUNI	LO28 COMMUNICATIONS SYSTEM UPGRADE	SYSTEM	UPGRADE	
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This program includes the design, acquisition, and installation of a basewide voice, video, and data communications system for the Naval Weapons Center (NAVWPNCEN). It is required because the current voice communications system is based on a World War II vintage mechanical switch. It does not provide high speed data transmission. The current system is marginally reliable and is not cost effective to repair. The present telephone lines to various NAVWPNCEN population areas are not adequate to handle data and video transmission essential for cost efficient sharing of ADP files, applications, and hardware.

The Communication System Upgrade will alleviate these problems by providing a state-of-the-art digital switch for enhanced voice communications and high speed switching for data and also a liber optic backbone trunk to connect major population areas with analog and digital video connectivity.

The economic analysis conducted for this project indicates that \$0.9 million in required investment costs for local area networks will be avoided each year. In addition, the 10-year expected useful life will result in annual cost avoidance of \$2.3 million in operating costs starting in FY 1994.

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warfare systems has become essential due to advanced technologies in the systems themselves and the sophisticated threat environments in which those systems must operate. In concert with this technical evolution, requirements for computer intensive analyses at the Naval Weapons Center far exceed the Center's existing computer capabilities. The use of remote supercomputers has been carefully evaluated, but is not practical due to classified processing requirements (up to Top Secret level). Furthermore, the need for realtime simulation and high speed image processing requires data transmission speeds far greater than can be accomplished remotely.

The FY 1989 procurement will provide a basic supercomputing capability for the Naval Weapons Center. A conservative sizing approach will require vendors to bid a machine which can be upgraded in both memory and processing speed, without committing the Government to purchasing more computing power than actually required. Economic analyses indicate that the basic supercomputer project will yield over \$2 million a year in productivity based cost avoidance as a result of the increased speed of processing scientific and enqineering data. In addition, another \$2 million of cost avoidance each year will occur in the area of weapons systems development as the supercomputer's advanced capability to perform more test and analysis through simulation is used in place of actual flight testing. Such cost avoidance will be realized throughout the 10 year expected useful life of this system.

The FY 1990 effort has three components which will provide significant improvements in computer operations, computer graphics, and mass storage. The first component will increase the number of front end computers from one to three and permit users to submit unclassified or classified

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The Advanced Technology Computational Facility (ATCF) at the Naval Coastal Systems Center's basic requires the procurement of an additional computer in order to support the Center's basic research, exploratory development, and specific systems development efforts. This system iprimarily supports acoustic, signal processing, hydrodynamics, Remotely Operated Vehicle (ROV) simulation, and structure analysis projects performed by the Center's Research and Technology Department. The ATCF operates 24 hours per day, 7 days per week, and is completely saturated from an operational perspective which has resulted in low computational productivity, poor turnaround, and the inability to process specific work tasks. In the interim, commercial ADP resources are being utilized to augment the ATCF, however, this arrangement is not cost effective and does not provide the dedication required to satisfy project needs in the required timeframes.

Not acquiring this equipment would result in delays in the Center's basic research, exploratory development, and systems development programs, therefore delaying the introduction of new stechnology and systems/equipment into the Fleet.

It is estimated that this investment would provide for cost savings to the Navy of \$213K annually over the system's 8 year life.

**NIPOSTANTAR RED CENTERS/NAVAL COASTAL SYSTEMS CENTER COUNTERMEASURES EVALUATOR (CME)    Pr 1988   Fr 1989   Fr 1989   Fr 1989   Fr 1980   Fr 1981   Fr 1991   Fr 1991     ELECTRIC CONDUCTOR CONTINUED   PRINTING CONTINUED   PRINTING CONTINUED   PRINTING CONTINUED     Analog Computer	C. ACP-1 Line L035
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submarine underwater defense to improve simulation of torpedo threats for the surface ship and simulate two simultaneous torpedo threats as well as extend the capability to simulate four simultaneous torpedo threats as well as extend the capability to simulate four will also allow for processing of the more sophisticated equations required to simulate today's advanced torpedoes. In addition, the current hardware systems are over 20 years old with service and spare parts becoming extremely difficult to obtain. This factor is causing increasing

The most severe impact if this equipment is not procured will be the inability to evaluate multiple hardkill weapons versus salvo threat torpedoes in realistic scenarios. In addition, most advanced counterweapon concepts require a highly manuverable body to successfully complete their mission. The inability of the present computers to run the advanced hydrodynamic models procludes the simulation of advanced counterweapons. In summary, not acquiring this equipment would result in advancement delays in the Navy's torpedo defense programs and the Naval Coastal Systems Center's ability to perform the realistic multi-threat testing and evaluation of surface ship and submarine underwater defense systems.

It is estimated that this investment could provide for cost avoidance to the Navy of \$180K annually over the system's 10 year life.

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support the Navy's sonar and torpedo Juntermeasure engagement modeling needs for surface ship land submaring countermeasure programs. A recognized torpedo defense engagement model does not currently exist within the Navy. The developing joint United States/United Kingdom (US/UK) surface Ship Torpedo Defense (SSTD) Program has provided the Navy with a unique opportunity to bring on-line a validated torpedo defense engagement model. Requiring a dedicated computer system, this model will be used to conduct technical mission, campaign, and engagement analysis of new countermeasure concepts and approaches and will allow for evaluation of the countermeasures concepts and approaches and will allow for evaluation of the laboratory environment prior to costly at-sea testing. The system will also aid in assessing the impact of proposed countermeasures concepts on the Navy's existing sonar and torpedo countermeasures systems and equipment. The TDEM will complement the Countermeasures Evaluator (CME) facility providing for the full range of analysis capabilities required.

Not acquiring this equipment would halt the further development of the US/UK SSTD program with the US not being able to fulfill its agreement with the UK. Further developments in the sonar and torpedo countermeasures program would be delayed resulting in increased at-sea testing to evaluate countermeasure alternatives. the

It is estimated that this investment could provide for cost avoidance to the Mavy of \$360K annually over the system's 10 year life. It is

NEF/SPAWAR R&D CENTERS/NAVY    Pr 1998	ASET CUITALING  (DULL)  PACTIVITY  S/NAVY COASTA  IV 1993	ASET CUTITALISATION PROGRAM JUSTIFICATION SHEET  (DALLates in Thousands)  LATE OF THE SYSTEMS CENTER  FY 1988  HAT 1988  HAT 1988  HAT 1988  HAT 1988  HAT 1988  HAT 1988  HAT 1988  HAT 1988	LO37 CMF SIGNAL AP	A. BUTGET SUBMISSION TIT 1090/1991 BIENNIAL ption HALYSIS SYSTEM    FT 1001	
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The Signal Analysis System will support the Navy's surface ship and submarine sonar and torpedo countermeasures programs by providing Naval Coastal Systems Center with the capability to perform idetailed signal analysis of data collected during sea trials. Analysis of this data is difficult, time consuming, and costly to perform manually and is an ongoing problem encountered in performing the Center's mission. This analysis will provide the data required to simulate a weapon systems operating environment, which is essential to develop the weapon system, establish realiable test procedures, and accurately assess the weapon system's ability to perform under leasistic conditions.

Not acquiring this equipment would significantly impact the Center's ability to timely and cost effectively provide the Navy with a surface ship and submarine sonar and torpedo countermeasure defense. Manual analysis of the data to support the Surface Ship Torpedo Delense (SSTD) Programs has been estimated to require 8 manyears of effort and would result in program delays of approximately 9 months.

It is estimated that cost avoidance of \$102K in reduced labor costs to perform data analysis requirements could be realized annually over the system's 10 year life.

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8. Industrial Fund/Activity Group/Activity	· · ·	C. ACP-1 Lane No. & Itam Description	
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The Research, Evaluation, Simulation and Analysis Facility at the Naval Ocean Systems Center Porovides a simulated, real-time warfare environment necessary to support various Navy provides a simulated, real-time warfare environment if requires weapons of greater complexity, and the time available to the battle force to react to impending threat is diminishing. The exercise by which the Navy tests, refines and improves its warfighting capability depends upon its ability to simulate the warfighting environment. To maintain fleet readiness and its warfighting capability at a minimal cost environment. To maintain fleet readiness and its warfighting scapability at a minimal cost of the Navy must maintain and expand its simulation capability ashore will result in the savings of millions of dollars annually that would acquisition of this computer system for the purpose of scenario generation, simulation and the additional benefit of an R&D analysis tool is a key component of this required ability. The additional benefit of an R&D analysis tool is a key component of this required ability in the Navy's capability is not improved. This would result in a more costly reassignment of dedicated fleet assets to support these functions.

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Narrative Justification:

The procurement and upgrade of this computer system will provide the Naval Ocean Systems Center a massively parallel processor. By this acquisition the Navy will be able to transition to incommercially available, emerging technology to the Navy's C31 effort. Furthermore acquisition of this capability will increase the Navy's processing of many Command and Control and Intelligence on fleet command and control and battle management, developing command and control systems and intelligence processing efforts as well as decision support tools for the fleet. For example many existing efforts use computer code which is overly simplified and slower than necessary, yet potentially able to exploit massive parallelism, and there is no current ability to merge the results from two or more computer models. The acquisition of a massive parallel processor will presently being developed. Some of these simulations require several days to complete even though the results are frequently needed within minutes or hours. The above processor could allow the results of these simulations to be available when needed. The use of a commercially successful venture minimizes the risk in the Navy's effort to rupidly transition available advanced technology to the solution of fleet problems.

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The Naval Ocean Systems Center operates a Program Generation Center which supports the Integrated Combat System Test Facility, the Tactical Warfare Simulation, Evaluation and Analysis System, the Advanced Combat Direction System (ACDS) Block 1 program and various other Navy programs. The Advanced Computer system was refurblished in FY 1987 and continues to provide reliable time-sharing resources to programs at the Naval Ocean Systems Center. However it has become evident that the main thrust of programming activity is moving to the use of MTASS and ADA and programming languages. The ADP assets of the Program Generation Center are unable to host these systems. The compiling systems are hosted on commercially available computer systems. These compilers are becoming the major programming systems, e.g., ACDS Block 1 uses MTASS as their programming tool. If the Naval Ocean Systems Center is to continue to provide software generation capability to these and other programs, it is imperative that a new computer system be purchased for the Program Generation Center.

	System	1	6. ACP-1 Line Discription   C. ACP-1 Line Discription   C. ACP-1 Line Discription   MIF/SPAWAR R&D CENTERS/NAVAL OCEAN SYSTEMS CENTER   LO41 SUPERCOMPUTER SYSTEM	A. BUTGET SUBMISSION  1.7 1990/1991 BIERRIAL  R SYSTEM  R SYSTEM  1	A B   1   1   1   1   1   1   1   1   1	ASSET CANTALLATICE PROGRAM JUSTIFICATION SHELT  (DOLLARS IN THOUSANDS)  LEVIEY  AVAL OCEAN SYSTEMS CENTER   LOA  1988   FY 1989    St   Total Cost   Quantity   Unit Cost   Total Cost   Ounter	ASSET CAPITALIZAT  (Dolls  I Fund/Activity Group/Activity  AR R&D CENTERS/NAVAL OCEAN    FY 1988     COST   Quantity Unit cost   Total cost	NIF/SPAWA
CENTERS/NAVAL OCEAN SYSTEMS CENTER    FY 1989   FY 1989    Instity   Unit Cost   Total Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost	C. ACP-1 Line Bit is the Evertiption   C. ACP-1 Line Bit is the Evertiption	CENTERS/NAVAL OCEAN SYSTEMS CENTER		1990/1991 BIERRIAL		rs in Thousands)	•(100)	
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The Navy presently faces a critical problem in maintaining a viable ASW capability in the face of radiatal improvements in the quieting of Soviet submarines. Reductions in submarine radiated noise have been and are projected to be so substantial that evolutionary improvements in detection systems will not restore sufficient capability to counter the submarine advantages. In response, research and development initiatives almed at revolutionary performance improvements in signal processing in provenents in signal processing. To concepts is linked inexorably with achieving dramatic improvements in signal processing. To solve the pending ASW problem, orders-of-magnitude improvement in computational capability are infegral part of a planned facility to develop applications of massively parallel signal processing to ocean surveillance and support sensor system simulations. This facility will processing to ocean surveillance and support sensor system simulations. This facility will couple the supercomputer Might parallel processors and provide access to live available to the Navy research and development community on a nationwide basis via a secure high bandwith network. Based on an economic analysis, the expected annual cost decrease of high bandwith network. Based on an economic analysis, the expected annual cost decrease of nearly \$1.1M indicates a savings-to-investment ratio of 1.7 amortized over an expected 6-year lifetime. This cost savings is due to the reductions in software development to result in approximately \$550K savings. The ability to timely simulate occan surveillance problems will reduce at-sea plattform and sclerific mannopwer costs by more than \$1.3M each year.

Algorithm development of the supercomputer acquisition is the purchase of a large number of main-computers and/or array processors. this approach rada may not provide the computational power required to solve research and development and may not provide the computational power required to solve research and development problems in a reasona

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The Naval Ocean Systems Center performs basic research, exploratory development, analysis, design, implementation, and simulation in assigned mission areas. These areas include command and control, communications, combat system integration, biosciences, surveillance, weapons systems, deep ocean engineering, and submarine arctic warfare.

Narrative Justification:

The equipment to be purchased with these funds is a mini-supercomputer to be operated by the General Purpose Computer Center (GPCC) for use by projects in all of the mission areas mentioned above. A mini-supercomputer currently in-house will be dedicated to the use of some highly classified projects. Projects that now use that computer will need access to another resource. Important examples of intended applications are simulation for command and control projects and signal processing for surveillance.

Cost savings will result from the use of the equipment for some projects, because simulation of performance can be performed prior to actual construction and deployment, and the improved design will have a lower life cycle maintenance cost. However, cost savings are not the primary justification for the equipment. Better performance and increased reliability of the systems delivered to the fleet by projects using the equipment are the real justification. Failure to detect or correctly identify one incoming torpedo or airplane by a single ship (and hundreds of ships will carry systems developed using this equipment during its 6-year lifetime) will cost more than one computer.

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ISSION				lúoi 1	Unit Cost					nt is to provide a more powerful state-of-the-art computer system to allow full of the planned goal of providing increased Office Automation (0/A) and capabilities to all Center employees. The Center is now installing a bollar funded network will increase the work load on the system by increasing the number of usetwork will increase the work load on the system by increasing the number of uservices to less than half of the Center employees. The system also supports services to less than half of the Center employees. The system also supports a government agencies. As more users are added and more tasks automated the soft a system is now being reached. With the added workload generated by the near the capacity of the system will be exceeded and instead of increasing tere will be detrimental effects to all users of the system and savings already pelost. Procurement of a more powerful system, in addition to providing more to support the additional workload, will save computer room space and result mainten—ance, air conditioning, and electrical power usage.
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	}	Pund/A	R R&D		cost lo				 <b>-</b>	This procurement in the procurement in the procurement of implementation of its processing the system. This network provides these series the system of the system of the capacity of the capacity of the productivity there capacity is and other productivity there capacity of the cost savings in materials will be cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in materials of the cost savings in ma
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The projected strategic and technological environments for submarines in the year 2010 indicates the requirement for a departure from the traditional evolutionary design of submarine systems. The Operational Automation segment under the Advanced Submarine Technology Program (ASTP) sponsored by DARPA provides the framework to reach beyond present approaches for submarine systems management. The goal is to achieve full operational automation. However, the degree of system autonomy will be dictated by the political and technological environment of the 2010 timeframe, in particular, data and information clustering algorithms, integrated ship-management command assistant.

ASSET CANTENALIZATION PROGRAM DISTIFICATION SHEAT   A. BHIGHT SUBMISSION   (Dollars in Thousands)		VID TAYLOR RESEARCH CENTER LO45 SUPERCOMPUTER SYSTEM ADDITIONS AND MODIFICATIONS	1986	Unit Cost   Total Cost   Ciantaty   Unit Cost   Total Cost   Quantity   Unit Cost   Total Cost   Otanity   Unit Cost   Total Cost	1 2,040,		stem which was installed in FY88 provides the primary Scientific and capability for the David Taylor Research Center. Initial implementation arge engineering applications produce volumes of temporary data far exceeding scientists and engineers utilize this power to develop more precise computing power to davelop more precise acientists and engineers utilize this power to develop more precise lete a given project. Additional and faster storage devices are required to project and the users of the Supercomputer System require a system that will classified processing to complete these projects in a timely manner. This is the system to provide a state-of-the-art resource for all Center scientists of the current system. This procurement is for additions the system to provide a state-of-the-art resource for all center scientists of processing for Center users. A combination of additional memory, media and tape drives will be procured to satisfy these needs.	
ASSET CAUTTALITATION PROFRAM DIST	8. Industrial Pund/Activity Group/Activity	CENTERS/DAVID TAYLOR	r 1988	ELECTRICS OF COST   Quantity   Unit Cost   Total Cost   Ciantity   Unit Co	Systems Additions	 	The Supercomputer System which was installed in FY88 provide Engineering computing capability for the David Taylor Research is minimal. Large engineering applications produce volute memory of the current systems. Experience has also show becomes available, scientists and engineers utilize this powerlations of the physical data they are investigating. Accomplete a given project. Additional and fare utilized to complete a given project. Additional and fare utilized to complete a given project and the users of the Supercompupovide interactive classified projects and the users of the Supercompupovide interactive classified projects and the users of the current system. The possible given the configuration of the current system and modifications to the system to provide a state-of-the-are and englineers, to support the computing needs of Center users, to support the computing needs of Center users, projected and tape drives will be procured the processors, storage media and tape drives will be procured the system.	

Archival Subsystem (MSAS) consists of a magnetic tape diggraph of trillion bytes of very large research and engineer computing systems supporting the entire Center and currence global disk file system that supports a given S&E compovided on the global file system and the user's file is large masses of data.  In essence the MSAS provides a relating masses of data.  This would interrupt all users for store new data. This would interrupt all users SAS subsystem will be required in FY-90 for utilization for installation in early FY-89. The expected life of standard magnetic tane subsystem will be converted and any or the MSAS expansion would be to develop new software to	and training y slory system is system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the system in the	
system software development majerit cape subsystem. Inls approach would cost over \$1 floor space of one MSAS. The most cost effective approach available and would require MSAS subsystems. Both devices are under an existing contract with CDC. Installation will be in existing computer space and no modifications or other government will be incurred. The existing maintenance contract of contract of the resisting maintenance contract of contract of the resisting maintenance contract.	cost over \$1M in new   would require 5 times the   to procure additional   Installation of this   ler government expenses	

B. Industrial Pund/Activity Group/Activity  NIF/SPAWAR R&D CENTERS/NAVAL SURFACE WARFARE CENTER  LO47 S&E-EXPAND EXTENDED MEMORY  RY 1989  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970  FY 1970
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The expansion of the extended memory computing component will provide a high speed mechanism for coupling the Control Data Corporation (CDC) 990 computer, to be installed in early F789, with the existing CDC875 computer to form a loosely coupled computing system running in an unclassified mode. This configuration provides the capability for direct sharing of program and data files between users of the two Scientific & Engineering (S&E) computer systems. This eliminates the need to physically move programs and data files between systems. The extended memory capability eliminates the need for additional operations personnel to perform physical movement of files between systems and to provides secondary level high speed memory for processing large arrays of data without swapping the arrays to slower disk devices. This capability fosters operational efficiencies and improves job through-put resulting in material cost/benefits for Center programs. The inability to transfer files between computers on demand reduces the availability to the user of host depended software packages residing on other machines.

The memory is covered in the existing contract with CDC. Installation of this equipment will be into an existing computer and no modification to facilities or other government expenses will be necessary. The existing maintenance contract calls for the vendor to provide all necessary man power for installation.

ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHELT   A. POPLAT SURVESTION	yActivity   C. WP-1 Lana By a free freetreeton	CENTERS/NAVAL SURFACE WARFARE CENTER LO48 OA-MINICOMPUTER REPLACEMENTS	F: 1989	ELECTIONS OF COST   Quantity   Unit Cost   Total Cost   Quantity   Unit Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost	5   407   2.035				
ASSIT CAPITALIZATION HOWAN	B. Industrial fund/Activity Group/Activity	NIF/SPAWAR R&D CENTERS/NAVAL SURFACE WAR	FY 1988	Eligibits OF COST  Quantity  Unit Cost   Total Cost  Quantity  U	Minicomputers 1 1 5 1	 	 	 	

The Center's integrated Office Automation (OA) system currently provides tools for information management to over 1500 users: administrative, management, and technical personnel, including all line management and staff. Intangible benefits have accrued through improved worker productivity and performance. Various indicators of productivity enhancement show increases of at least 20 percent above baseline levels. If we assume that a man year cost is \$90K, and we use a conservative 10 percent increase in productivity for 1400 users, then our return on investment is \$12.6M per year. The tools provided include electronic mail, word processing, data management, forms processing, and personal computer file transfer. The users are physically located throughout the Center, including the five remote facilities.

In addition to the new users that are placed on the office automation systems each year, service to current users is continually being upgraded. These upgrades are in the form of moving users to more powerful systems, expanding memory and/or number of ports on current systems, and by providing additional applications.

This Currently, 5 of the 20 minicomputers in this system are near the end of their useful life. Thi investment would replace 5 VAX 11/780 machines with competitively procured latest technology, more powerful machines with larger storage and memory capability, and additional communication ports. The cost of operation would decrease and more customers could be served with better quality. These replacements will also reduce computer room crowding because they have a much smaller footprint.

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This is part of a 1983 competitive procurement, time-phased in optional increments for a 10 year program providing Scientific & Engineering (S&E) computing support for all major programs at the Center. The FY88/89 procurement provides Control Data Corporation (CDC) 990 computing equipment to overcome validated capacity deficiencies faced by multiple major NSWC programs (Standard costs and technological risks -- because they then must use alternative higher cost resources, and/or accept lower quality and late R&D results and risk reduction in warfare systems acquisitions and upgrades. Cost avoidance resulting from this action will be \$300K in FY 1989 the capability and cost avoidance resulting from this action will be \$300K in FY 1989 the capability and cost avointance of 100 percent per year. Major Navy programs at NSWC are planning on operational in early FY89. Refurbishment of available facility space is under way on a compatible schedule. The procurement is in line with planned growth that was built into the original contract and projected work load growth, along with the necessary up-grades to maintain a favorable cost/benefit ratio. The expected life of this system is 6 years.

Marrative Justification:

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The requested mini-supercomputer will be used to develop and run computer codes which solve problems of interest to the Navy and the Defense Nuclear Agency (DNA). The Center has developed codes which have become widely used and accepted in government and industry in support of projects such as the Standard Missile Program of the Navy, Rail Garrison, and the Weapons Effects Manual (EMI) program of DNA. These codes represent the state-of-the-art in Computational Fluid Dynamics (CFD). The mini-supercomputer will widen the scope of problems for which these codes can be used. In addition it will permit these codes to be run more economically and allow further development of CFD codes for use on supercomputers.

The requested Mini-Supercomputer should be one-third as powerful as the CRAY-1 Series of Supercomputers. Assuming the Center could keep the computer running continuously, this machine would yield the equivalent of 2920 Cray hours per year. Projecting the average cost of CRAY time would yield \$730K worth of CRAY time per year. Averaging over the expected six year lifespan of the Mini-Supercomputer, taking into account yearly maintenance costs, the savings in computerime to the government would total at least 3,120K. This does not take into account the increased productivity of Center personnel owing to their access to adequate computational resources.

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This Central Processing Unit (CPU) will be added to an existing computer system that is used to provide systems support to the Navy in the areas of weapons effectiveness analysis, systems accuracy, and target vulnerability. Analysts in each of these areas develop, modify, and support a wide variety of simulation programs and data bases. These efforts support many Navy programs, including AEGIS STANDARD Missile, PHALANX, HARPOON, TOMAHAWK, BLOCK PROGRAMS, PHOENIX, SSVP, JTCG/ME, and a number of gun weapon system programs.

The procurement of an advanced CPU and additional disk storage is part of an approved (1986).

9-year Information System (IS) Project. This procurement will address the increasing need for more comprehensive and sophisticated simulations in the three major areas mentioned above. The advanced CPU will address the increased run times of these simulations and help to provide results on a timely delivery schedule. As the sizes of these simulations grow in proportion to their increased scope, a large increase in disk space will be necessary to store the larger executables, dita files and graphics images they produce.

Without these increased capabilities, it will not be possible to supply a sophisticated systems analysis capability that is timely, accurate, comprehensive and cost effective.

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An additional CPU (Central Processing Unit) is needed to increase the capacity of the Center's classified Scientific & Engineering {S&E} computer system to meet expanding classified computing requirements. This expansion is an incremental part of the previously approved 1981 competitive procurement, time-phased in optional increments for a 10 year program providing general purpose Computing at NSWC. The system supports numerous NSWC programs including SLBM (Submarine Launched Ballistic Missile), AEGIS and Space and Geodesy. By FY-90 the classified computing system will be completely saturated. This will create a situation of slow job turn-around time resulting in deliveries to the fleet. The procurement is in line with planned growth built into the original contract and has a projected life of 6 years.

The CPU is covered in the existing contract with the Control Data Corporation. Installation of this equipment will be in existing computer space and no modifications or other government expenses will be necessary. The existing maintenance contract calls for the vendor to provide all necessary manpower for installation.

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NSWC has principal responsibility for the research, development, testing, and evaluation of effective ASW underwater weaponry. The Underwater Warhead Analysis Facility at the Naval Surface Warfare Center was established to provide a unique Navy computational capability for personnel involved in the development of underwater warheads. Improved computational capability is needed to evaluate, analyze and optimize new designs, reduce developmental risk, and evaluate the effectiveness of weapons systems involved in the LIVE FIRE test programs. Realistic simulations of complex explosive interactions during testing and development are critical to insure that the weapon system will perform, as required, at sea. NSWC will not be able to provide full support to the Fleet without the requested Advanced Arithmetic Processing System.

The primary benefit of this competitive procurement is the ability to develop new designs with high probability of meeting performance requirements at minimum testing costs. Previous attempts at simulating complex interaction of explosive systems underwater unsuccessful due to the limited memory and mathematical power of existing classified processing systems. The proposed system will reduce the risk and cost by over \$300K per year by minimizing the number of full scale live explosive tests, which would become necessary for the completion of mandated goals for safety, reliability, and performance.

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To provide minicomputers for the prototyping and production of print, mail and file servers for NOA (NSWC Office Automation) customers.

The NOA program plans to produce a system that takes advantage of personal workstation technology to provide OA functionality for business and technical work throughout the Center. The system will provide the tools with which users will create electronic data and exchange information between systems. The NOA program will develop and then provide a computing environment in which the required set or suite of business and technical computing functions (tools) are available to

Initial planning has indicated that a phased approach needs to be used to reach NOA's goals. systems will be defined and implemented as technology allows, starting with less sophisticated progressing toward a system which provides full OA functionality. All systems recommended by NOA will have evolved through evaluation, development and prototyping before being released for production.

Data collected from the current Center-wide OA system, shows a 20 percent to 35 percent gain in productivity by customers. It is anticipated that NOA customers will realize similar or greater gains. It is estimated that each server will support approximately 125 users. If we assume, a value of \$90K/manyear and a conservative 20 percent productivity savings, the return on investment (2 servers, approx 250 users) will be on the order of \$4.5M annually. Additionally, because NOA is addressing the PC/OA functionality issue from a Center-wide perspective, with plans to provide Center-wide services, isolated radundant efforts should be minimized.

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Sents a major upgrade to the existing Scientific and capability with options to satisfy NSWC's completed applied by with a total investment of \$28M will be implemented in increments due period FY91-94, a total investment of \$28M will be implemented in increments due period FY91-94, a total investment of \$28M will be implemented in increments due period FY91-94, a total investment of \$28M will be implemented in increments due period FY91-94, a total investment of \$28M will be during the decade beginning 1900's will require ter capacity to satisfy computational requirements for center programs such as STANDARD Missile, \$18M of problems currently not solvable on Center resource and Geodesy, to perform detailed three diffich will be more complex and robust than present datthe speed and capacity to perform detailed three diffich will be more complex and robust than present datth, only coarse 3-b structural computations are positive resources.	Sents a major upgrade to the existing Scientific and competitively procured in 1983. The system will be not one period Fy91-94, a total investment of \$28M will be not capacity to system and a high performance uncladed during the decade beginning 1900's will require ter capacity to stisfy Computational requirements of Summing in Fy92 as more powerful requirements to stisfy to stisfy Computational requirements of a capacity to stisfy Computational requirements for capacity to stisfy Computational requirements for capacity to stisfy Computational requirements for capacity to stisfy Computational requirements for capacity to stisfy Computational requirements for capacity to stisfy computational requirements for capacity to solve major technological plucy base areas. The new more powerful system we produce as follows:  The follow-on system is needed to meet the expand ajor center programs such as STANDARD Missile, SLBM hich will be more complex and AcGIS as well as numerous for problems currently not solve major technological plucy mail be more complex and robust than present dative will be more complex and robust than present dative made as follows:  The speed and efficient systems simulation and modeling battle management for tactical and strategic sistems is battle management for tactical and strategic sistems.	PAWAR R&D CENTERS/NAVAL	CE WARFARE CENTER  Fr 1989  Guntify   Unit cost   Total cost	Committy in the cost   Total Committy   In the cost   Total Committy   In the cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost   Total Cost	major system  r rang  neering (SEE) con  e-phased competit  requirements thi  he decade beginn a  d computing system  d computing system  old increase in 1	puting 3,500 3,500 mg in mg in mg in ingh isolete
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d. Provide long term cost-effective means of meeting Center computational The cost per computation will be dramatically reduced due to technological advancomputing components and computer system integration.	putational requirements.
e. Provide resources to solve computationally intense three-dimensional fluid dynamic problems for effective and efficient missile design.	ensional fluid dynamic
The procurement of a follow-on system represents a \$22 Million savings in life cost versus a status quo situation. Without the follow-on system, the research and needed for timely deployment of mission critical Fleet products will be jeopardized benefits will not be obtained.	avings in life cycle support e research and development be jeopardized and the above
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NSWC has major system and software engineering responsibilities for TRIDENT, TOMAHAWK, AEGIS, Underwater Weapon System, and many other Fleet systems. Tasks range from the definition of requirements through the conduct of software life support functions. The Center has initiated an esfort to increase productivity, quality and commonality across these programs through the esfablishment of a System/Software Engineering Environment (SEE). This facility will be used to develop and/or assess, distribute and support tools of benefit to the user community. The facility will also disseminate information of importance and provide for community. The users sharing of tools, algorithms, techniques and data bases. The Data Base Machine is an integral part of the planned facility. It is needed to store, manage, manipulate and access the large information base which is required to perform the SEE functions.

Without the SEE the various programs will be forced, as they have in the past, to individually develop/evolve and support engineering environments, which contributes to escalating costs.

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and The Digital Data Acquisition System (DDAS) being procured will provide advanced acquisition processing capability to NUSC technology development programs. It will support measurement efforts that are torpedo borne, ship borne, and land based. The DDAS will support programs working in noise reduction, novel vehicles evaluation, mobile acoustic systems, and more. The capability that will be provided by DDAS is vital for the development of new torpedo quieting technology urgently required by the Navy to meet the improved capabilities of threat targets.

IIn FY 1986 NUSC began a \$3M commitment to provide a large capacity, high density, record/playback system which includes state-of-the-art digital recording techniques. The funding profile is: FY 1986 - \$250K, FY 1987 - 1,750K, FY 1988 - 750K, FY 1989 \$251K. This same system will require an estimated \$114K/year to operate and maintain. To rent or lease equivalent equipment is projected to cost \$94K/year. Based on a 15 year useful lifespan (based on historical usage of similar lequipment), the total cost of the DDAS will be \$4.7M. Renting/leasing over the same period is projected to be \$14.2M. Therefore, the total savings of procurring the DDAS would be \$9.5M or \$633K/year.

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capacity or the central computer at the mayar processor usage as reflected by historical on-line computer capacity will reach an expected peak processor usage as reflected by historical on-line languages of 100 percent. This substantially impacts the time sharing environment by increasing the user response time to greater than 30 seconds which is unacceptable to the user community. Further growth is expected in the interactive graphics environment, engineering analysis (PATRAN and NASTRAN), Center data bases, and project management computer systems. Disapproval of the procurement of additional central processor capacity will leave the system in a state of gridlock. Work that is anticipated will not be able to be performed and the current work load will reach a point of system saturation and therefore, seriously impact our users.

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	ASSET CAPITA	MILLATION PROGRAM JUST (Dollars in Thousands)	ASSET CAPITALIZATION PROSPAM JUSTIFICATION SHEET (Pollars in Thousands)	13		A. BULGET	BUIGET SUPPLISSION	
						1661/0661 8.1		BIENNIAL
NIF SPAWAR RED CEN	WERS/NAVAL UNDERWATER CENTER		SYSTEMS }	c. 1558	Ebd for bisk' subsystem	jĄ.,		
	1988		r 1989		FY 14000		1601	
ELEMENTS OF COST  Quantit	y Unit Cost   Total	Cost  Quantity  Un	Unit Cost   Total Cost		Countity Unit Cost   Total Cost	ost  Quantity	Unit Cost	Total Cost
Disk Subsystem 				 		2 -	1 009	1,200
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				<u>-</u>		_	-	
Marrative Justification:								
administrative computer. This will provide additional mass storage for the Center's scient and engineering users. The available additional mass storage for the Center's scient expected utilization of 100 percent. Once capacity has been reached, additional prement at a capacity will reach an addata storage can not be met. This substantially impacts the time sharing environment by increasing user response time due to operator intervention. It is anticipated that user distorage requirements will continue to grow at 20 percent to 30 percent per year. Disapproprocurement of additional disk storage capacity will leave the system in a state of the procurement of additional disk storage capacity will leave the system in a state of gridlock. Work that is anticipated will not be able to be performed and the current work will reach a point of system saturation and therefore, scriously impact our users and the projects that are depending on the utilization of the adminstrative computer.	computer. This we users. The avairation of 100 perconnects will continuents will continuent is anticipal that is anticipal int of system satre depending on the continuents will continuents with the continuents will continue the continuents will continue the continuents will continue the continuents will be continuents with the continuents will be continuents with the continuents will be continuents with the continuents will be continuents with the continuents will be continuents with the continuents will be continuents with the continuents will be continuents with the continuents will be continuents with the continuents will be continuents with the continuents will be continuents with the continuents will be continuents with the continuents will be continuents with the continuents will be continuents with the continuents will be continuents with the continuents will be continuents with the continuents will be continuents with the continuents will be continuents with the continuents will be continuents with the 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providually providually providually providually providually providually p	This will provide additional mass storage for available administrative computer disk capfile available administrative computer disk capfile provide additional mass storage for the available administrative computer disk capturation at 20 percent to 30 percent continue to grow at 20 percent to 30 percent contained a storage capacity will leave the system saturation and therefore, seriously impacting on the utilization of the administrative contained a storage capacity will be administrative contained and the storage capacity impacting on the utilization of the administrative contained and the storage capacity and the administrative contained and the storage capacity and the administrative contained and the storage capacity and the administrative contained and the storage capacity and the storage capacity and the storage capacity and the storage capacity and the storage capacity and the storage capacity and the 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storage capacity and the storage capacity and the storage capacity and the storage capacity and the storage capacity and the	comput comput comput comput comput cont cont cont cont cont cont cont con	This will provide additional mass storage for the Center's main The available administrative computer disk capacity will reach an 100 percent. Once capacity has been reached, additional requirements met. This substantially impacts the time sharing environment by time due to operator intervention. It is anticipated that user disk continue to grow at 20 percent to 30 percent per year. Disapproval inonal disk storage capacity will leave the system in a state of anticipated will not be able to be performed and the current work loa sturation and therefore, seriously impact our users and the ling on the utilization of the administrative computer.	e center y will tional trional ated trion in a st in a st r users	une Center's main out the Center's scientific outy will reach an additional requirements fring environment by cing environment by ber year. Disapproval o stem in a state of and the current work load out users and the omputer.	ntific nts for isk val of load

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This line item provides for the replacement of technologically obsolete equipment in the Scientific and Engineering Computer Facility. In order to effectively support the Center's Mission it is expected that new, cost efficient computer technology will have to be employed to access, process, manage, and store the huge masses of data associated with sophisticated weapons development. Specifically this calls for the replacement of 3 ten year old VAX 11/750 class computers, high capacity disk drives, and upgrade hardware for a data base machine. These new systems will have 8 times the throughput of the present configuration.

## REMOTE VAX MANAGEMENT

Presently there are multiple VAX class systems in operation at NWC. Each one of these systems require a system manager. NWC is establishing a "remote VAX management" capability. Essentially this means that one person can support several systems from a central point thus eliminating the requirement that each system have its own manager. This method of managing these systems will serve to avoid significant increases in labor costs for system mamangement (costs associated with iten system managers could be avoided in year one alone). This method of management can't be accomplished without the increase in central computing capability described above.

**NIE/SPAWAR R&D CENTERS  **Invastral Fund/Attivity Group Activity**  **Invastral Fund/Attivity Group Activity**  **Invastral Fund/Attivity Group Activity**  **Invastral Fund/Attivity Group Activity**  **Invastral Fund/Attivity Group Activity**  **Invastral Fund/Attivity Group Activity**  **Invastral Fund/Attivity Group Activity**  **Invastral Fund/Attivity Group Activity**  **Invastral Fund/Attivity Group Activity**  **Invastral Fund/Attivity Group Activity**  **Invastral Fund/Attivity Group Activity**  **Invastral Fund/Attivity UNDER SQUIPMENT COSTING UNDER STANDER**  **Invastral Fund/Attivity UNDER SQUIPMENT COSTING UNDER STANDER**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastral Fund/Attivity**  **Invastra	PT Line R. & Hos Good Park Standsher LO65 OTHER EQUIPMENT COSTING UNDER \$1 MILLION EACH Reform Reform 22,154  22,154    Mark Cost   Total Cost   District Cost   District Cost
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It This line item supports the general purpose equipment requirements of the seven SPAWAR R&D Centers. These Centers have a population of approximately 24,000 scientists, engineers and support personnel who manage technical programs with a total value of \$3.4 billion per year. covers a myriad of equipment and tools costing less than one million dollars each, which, in general, provide various capabilities:

(2)

earlier in  $\widehat{\mathbb{C}}$ 

to realize technology gains where only theory existed; to complete R&D with definitive results, making decision-quality information available, thereby reducing the risks of technology insertion; to complete R&D sooner than otherwise possible, enabling technical decisions earlier in the acquisition cycle, thereby lowering costs and subsequent risks; to replace manually operated and controlled equipment with computer-controlled equipment, product productivity and safety; and to add security and safety features to current capability, thereby gaining compliance with new regulations and avoiding risks of error and loss. **4** (2)

meet The acquisition of this equipment improves the quality and productivity of the R&D Centers' technology support to the Navy and continues the goal to modernize equipment inventories to commercial standards of average expected useful life (EUL) of 9-10 years. More than 40 per of the inventory currently exceeds this value.

FY 1790/1991 BIE:::HIAL   B. Industrial Fund/Activity Group/Activity   C. AT-1 Line fo. t Rea Centrified	_	ASSET CAPITAL	ASSET CAPITALIZATION PROMINAM JUSTIFICATION SHELT	ON SHEET		A. BULGET SURMISSION	SURMISSION	
B. Industrial Fund/Activity Group/Activity   C. KT-1 Line No. 4 Fra Construction   LO66 MINOR CONSTRUCTION   Fr 1989   Fr 1989   Fr 1989   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1980   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 1990   Fr 19	_	0	Dollars in Thousands)					-
Minor						FY 1990	1/1991 BI	SHUIAL
NIF/SPAWAR R&D CENTERS	B. Industrial Fund/Activ	vity Group/Activity		C. AC	P-I Line to. 4 Item Der	Gription		
ruction	NIF/SPAWAR R&D C	ENTERS			066 MINOR CONS	TRUCTION		
ruction		80.61 L	1 FX 1989		niól 1		έσ <b>i λ</b>	
ruction	ELEMENTS OF COST  Quant	1-1	ost  Quantity  Unit Cost   To	otal Cost   Ou	entity Unit Cost   Total	al Cost  Quanta	ty   Unit Cost	Total Cost
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Minor construction is used by the seven SPAWAR Research and Development Centers to accommodate new requirements, modernize and replace obsolete facilities. The Centers are located in 36 sites throughout the nation and have 13.4 million square feet of laboratory and office space. The Centers' real property acquisition costs have been more than \$780 million, replacement costs in comparison would be much greater.

Minor construction is used in the Centers to modify existing spaces or to construct new facilities mainly to provide suitable space to test and design new equipment for the forces affloat, often in a protected environment, frequently in physically secure areas. Some examples of these projects are: rearrange space in an existing building to test missiles in a shielded, information free environment; construct a security fence around a building where highly sensitive information will be used; alter space and install foundation for an anechoic chamber; construct laboratory and office space for engineers and scientists for conducting a development program in Frovide housing or altered laboratory space for an optical laser facility, a telerobotic laboratory, a global network simulation facility, and a 60-ton centrafugal chiller are some examples of unique or custom designed spaces for the particular accommodation of the equipment

IF-ACP1 Page 1 of 1

T T T T T T T T T T T T T T T T T T T	Item Description Equipment Purchases under Si million each Management Informations Systems under Si million	101 101 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	) >-	DEPARTMENT OF THE NAVY MARINE CORPS INDUSTRIAL FUND ASSET CAUTIALIZATION PROGRAM 0/1991 PRESIDENT'S BIENNIAL) (Dollars in Millions)    FY 1989   Cost   Quantity   Total     62   3.   1   1     1   1     1   1     1   1	DEPARTMENT OF THE NAVY MARINE CORPS INDUSTRIAL FUND ASSET CAPITALIZATION PROGRAM FY 1990/1991 PRESIDENT'S BIENNIAL BUDGET (Dollars in Millions)  Total cost   Quantity   Total Cost    1988   FY 1989  Total cost   Quantity   Total Cost    2.1   21   1.9  2.1   21   1.9  6.5   1   .5  6.5   5.5	9 40 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	FY 1990  Total Cost  2.3	6 6 58	FY 1991  Total Cost  2.7  2.7  3.8	

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		ASSE	T CAPITALIZ.	ALIZATION PROGRAM JUST (Dollars in Thousands)	ASSET CAPITALIZATION PROGRAM JUSTIFICATION SHEET (Dollars in Thousands)	ATION SHEET			<b>.</b> 	A. BUDGET SUBMISSION FY 1990/1991 Pres	BUDGET SUBMISSION FY 1990/1991 President's Biennial	t's Biennial
B. Industrial Fund/Activity Group/Activity Marine Corps Industrial Fund/Depot Maintenance	/Activity Gro dustrial Fund	'up/Activi /Depot Ma	ty			· ·	ACP-1 Li	ine No. & Ite	C. ACP-1 Line No. & Item Description I Equipment Purchases Under \$1 Million	notit.		
		FY 1988			FY 1989			FY 1990			FY 1991	
ELEMENTS OF COST   Quantity  Unit Cost   Total Cost   Quantity  Unit Cost   Total Cost   Total Cost   Quantity  Unit Cost   Total Cost   Quantity  Unit Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost   Cost	Quantity Un	nt Cost	Total Cost	Quantity	/ Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	1 1	Total Cost
Equipment Purchases	101 -		3,900	- 62		} 	40		   2,361 	85		2,675

Equipment, Multi-Function Generator, Laser Support Test Station, Automated Parts Storage, Lathe-Compact, Multing Machine, Master Calibrator and Crankshaft Machine Blast Booth and a Vertical Computerized Numerical Control Mill Machine. Purchases in the Budget Years include Spectrum Analyzers, Ultasonic Test These equipment purchases play a vital role in the DMA's ability to harness technology and labor saving devices to more efficiently execute the workload. a synthesized generator, a technical manual development system, Diagnostic Console, Radiac Calibrator System, 3-Ton Crane, Clean Air Ventilation System, Some purchases in the prior year include: engine lathe, unit level circuit switch test equipment, and retrieval system. Purchases in the current year Grinder.

THE HIGH FETCH ON SHEET	FY 1990/1991 President's Biennial
ASSET CAPITALIZATION PROMAN SOL	
, C ACP-1 Line No. & Item Description	iption
	its
B. Industrial Fund/Activity Fund/Depot Maintenance	FY 1991
Marine Corps Industrial Py 1990	
Total	1 Cost   Quantity   Unit Cost   Total Cost
Cost   Quantity   Unit Cost   Total Cost   Quantity	-
ELEMENTS OF COST Quantity Unit Cost 1944 Cost	
298	867   6   923
5 1 006 1 1 17 201 2 1	
Manor Construction   24	 
Narrative Justification:	C
	ity, safety, and morale. The projects are
and the necessary for environmental improvements to entrance one; Non-Destructi	ructive Test Facility, Expand
The Mino: Construction projects above and industrial facilities. A tem security for Handicapped and Upgrade Sheet have the Mino: Construction projects and Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of the Mino: Construction of t	incapped and Upgrade Sheet income
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B. Industrial Fund/Activity Group/Activity			(Dollars in Thousands)	(Dollars in Thousands)	ands )				_		FY 1990/1991 President's Blennial	nt's Biennia
editor autima	nd/Activity Industrial F	Industrial Fund/Activity Group/Activity Marine Corps Industrial Fund/Depot Maintenance	ity aintenance			j	ACP-1 Lir	se No. & Ite	ACP-1 Line No. & Item Description 3 Management Information Systems under \$1 Million	n under \$1 h	ullion	
		FY 1988			FY 1989	_		FY 1990			FY 1991	
ELEMENTS OF COST	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total	Quantity	Cost  Quantity  Unit Cost	Total Cost
Software System   Development			- 530	 - 		200			 			247
	-	_	_	_	-		-		_			
Narrative Justification: The Software Development is necessary	Cation:		support the	DMA Automate	Productio	on Control S	Ystem.					
Warrative Justific	Cation:		to support the DMA Automated Production Control System.	DMA Automate	d Productio	n Control s	ystem.					
darrative Justifi	Cation:		support the	DMA Automate	d Productio	n Control S	Vstem.					
farrative Justific	cation:		support the	DMA Automate	d Productio	n Control S	Vs ten					
darrative Justific	cation: lopment is n		support the	DMA Automate	Productio	G Control S	Vs ten					